Teacher Education

Vol. IV JANUARY 1960 No: 1

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A Teacher's Prayer

Teachers' Organisations in India

Re-educating the Teacher

Approaches to Curricular Development

Subject Teachers' Associations

Mass Copying—A Remedy

Introducing Books on Evaluation

and

Our Regular Features

DIRECTORATE OF EXTENSION PROGRAMMES
FOR SECONDARY EDUCATION
GOVERNMENT OF INDIA : MINISTRY OF EDUCATION

TEACHER EDUCATION

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THE DIRECTORATE OF EXTENSION PROGRAMMES
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A TEACHER'S PRAYER

Gabriela Mistral, a friend and admirer of Rabindranath Tagore, who wrote this beautiful poem in Spanish, is a well-known poetess of South America. It was translated into English from the original by by Srimati Leela Ray of Santiniketan and published in the Aryan Path. We reproduce it here for the benefit of our readers, with due acknowledgement to the Aryan Path.
—Editor

Senor: You are the Teacher. Forgive me for teaching also, for taking the name of Teacher, of Master, the name You bore on earth.

Grant me single-hearted devotion to my school, a devotion so complete that even the blazing of beauty will not rob it of my tenderness at any time.

Pluck out of me the impure desire for justice which perturbs me, the petty insinuating protest which rises within me when they hurt me.

Grant that others lack of understanding may not cause me pain.

Grant that I shall not grieve when those I teach forget me.

Grant that I may be more of a mother than the Mother, so that I may love and defend as a mother what is not flesh of my flesh.

Grant that I may be able to form one of my girls into a perfect poem, that I shall be able to bequeath my most poignant melody, fixed fast in her, for the time when my lips shall sing no more.

Reveal Your Gospel to me, if possible in my lifetime, that I may not desert in the battle of each day and each hour to search for it.

Place in my school, which is democratic, the splendour You used to shed upon Your group of barefoot children.

Grant me simplicity and grant me depth. Set me free from complications and from pretensions in my daily lessons.

Let me not bring to my work-table material worries or the small sorrows of the hour.

Make my hand light in punishment and soothing in caress. May I scold with sorrow that I may know how to correct with love.

May I build in spirit my school of bricks; in the warmth of my confidence I shall wrap its poor porch, its bare room. May my heart be a pillar of the school and my hopes golden columns like those in a rich school.

—*Gabriela Mistral*

Editorial

The theme for the New year's number of *Teacher Education* is "the role of Teachers' Organisations in the development of education". We are very grateful to our contributors who are literally from the four corners of the country, for their most valuable articles on the subject. The main objective is not to discuss questions pertaining to the teacher's status or conditions of service but to consider how teachers' organisations can help in bringing about educational development. All the contributors have had considerable experience of work in teachers' organisations and their articles will reveal that there is a keen realisation among teachers and headmasters of the role that such organisations can and should play in the development of education. From salaries, conditions of service and various administrative problems, teachers' organisations have begun to include within their purview matters which concern the development of education. Such widening of the scope of their functions is conceived as a responsibility as well as a right. They realise that they have a duty to do what they can for the development of education and they are keenly conscious that they have acquired a professional stature and competence for fulfilling this duty. There is a growing awareness that being in the very midst of the situation, their contribution to educational development, both as regards policies and practices, will be vital and realistic in a sense in which that of the administrator or the educationist cannot be. The former is likely to lack the necessary vision and the latter the practical insight based on experience, to plan development in terms of realities. It is the collaboration of all three, the teacher, the educationist, and the administrator that can lay a firm foundation of educational reform. Educational reform, it must be remembered, is a continuous process and not something to be undertaken at specific stages, through the setting up of commissions and committees. The educational system must develop from one stage to another naturally and spontaneously, meeting new challenges offered to it constantly by the changing situations as they arise in life.

The question of the right to have opportunities to play a significant role in educational development is also there. With the firm conviction that they are capable of helping in the development of education in a manner in which other agencies cannot, it is but logical that teachers' organisations should consider that they have a right to be given their due share in planning

educational development and that it is educationally unsound that such plans should be evolved by the administrator alone.

Recently, the National Union of Teachers in U.K. has been organising a nation-wide series of meetings on the subject "The Teacher, the Child and the New Government". In these discussions, it has come to be stressed that the child's welfare cannot be divorced from that of the teacher and vice versa. The teacher's welfare is bound up with the opportunities that he can get for promoting the all-sided welfare of the child and the child's welfare is necessarily dependent on that of the teacher. The second is obvious, for it takes no effort to realise that a disgruntled and frustrated teacher cannot give the child what he needs for his growth. The first, though not so obvious, is equally fundamental. The teacher's welfare does not lie merely, or even chiefly, in the salary and the conditions of service he gets ; it lies even more potently in his getting a chance to do something worthwhile for the child.

In a thoughful study on the subject "The Status of the Teacher in England and Wales," E.G. Peirson in a recent issue of the Educational Review of the University of Birmingham, has suggested four factors as being of major importance in determining the status of a profession. These are : (a) the value placed by the public upon the service given by the profession, (b) the extent to which its practice depends upon a body of knowledge and skill not possessed by the layman but to be mastered by each practitioner before he is allowed to discharge his duties, (c) the extent to which its practice depends upon the application of general principles rather than a set of routine techniques, and (d) the measure of freedom which is allowed to the practitioner to do his job in accordance with the dictates of his own knowledge, understanding and conscience. It would do well to examine the status of the teaching profession in India in relation to these factors and to see what the teachers' organisations can do to ensure that these factors operate effectively in the profession.

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The Composite Reporter

Should the official year comprising the casual leave allotment for the year be the same as the calendar year or should it begin in April or August as appears to be the practice in some States in India ? Again should it be the same as the financial year or different ? At first sight, one is inclined to think that as long as the official year continues to have 12 months with 365 days, it makes no difference where it ends and where it begins. Coming from States where the official year begins on the 1st of April (April Fool's day is not perhaps a very wise choice for the new official year to commence), we took no special notice of the fact that the official, though not the financial, year in the capital coincided with the calendar year. As December dawned, we began to realise the subtle and psychological consequences of such a coincidence. The end of the calendar year usually brings with it a sense of lassitude, the typical end-of-the-year-feeling that whatever has been done has been achieved and that one can enjoy the last few days of the dying year in peace and quiet. This feeling which usually affects one's personal life, we discovered, gets transferred to one's work life when the work year and the calendar year coincide. The need for rest and leave becomes urgent and gathers momentum as the end of the year draws nigh. The last fortnight in December is a season of colds and coughs, influenza, rheumatic pains and various other ailments that human flesh is heir to. These ailments, genuine no doubt, appear to be psycho-somatic in character, induced by the consciousness that the year is coming to an end and that if one does not catch time by the forelock the casual leave will just lapse into oblivion. The end of the financial year is yet far off and there is no fear of well-earned but unspent grants lapsing. In good conscience, one can develop a cold or a fever and deserve the casual leave that one is entitled to in cases of emergency. At all levels in an office, there are casualties in December. There is no thinning in the ranks of the Class IV staff, however, at the end of the year. They are wise people who have used up all their casual leave well before December and the awareness of this develops in them an immunity to December colds and coughs and they brave the rigours of December with rare fortitude and muster in full ranks to the offices.

* * *

The change of 1959 A.D. into 1960 A.D. took place on Friday the 1st of

January 1960, bringing a new spirit with it. The New Year's message is: 'work, more work and still more work.' It must be after several decades that the 1st of January was not a holiday. All the plans one had made for a late night on the 31st of December, for staying up to ring out the old and ring in the New Year and for breakfast in bed in the morning of January the 1st, followed by a New Year's sumptuous lunch, fell to the ground. The 2nd of January, to add to one's troubles, was a Saturday, the first full working Saturday, as per recommendations of the Pay Commission. So on the 1st and 2nd of January one slogged at the files and tried to work up an enthusiasm for this New Year of work, a year in which Saturdays will be full working days and the holidays will be curtailed from 23 to 16 days, with no holidays on New Year's day—Shivratri, Baisakhi and Id-ul-Zuha and the holidays in respect of Holi, Dussehra and Diwali reduced from two to one in each case. A production specialist or the O & M Section would be able to estimate at the end of the year the increase in the output of work that would be yielded by this measure. There is a silver lining to this dismal cloud, though—the last Saturday of every month will be a full holiday. But the irony of fate is that in the year of grace 1960, January will have five Saturdays and February its full quota of 29 days. So there will be four Saturdays which will be full working days in January and an additional day in February because of the leap year. Anyway, one must be thankful for small mercies and one almost feels that the full holiday on the last Saturday of the month must be earned by hard and honest work through-out the month with no half holidays. One is also thankful that Sundays still continue to be holidays when the weekly shopping and all the other weekly chores, plus the disposal of files which require peace and quiet, undisturbed by the visitors, will be attended to. Will the time come when Sundays also will cease to be holidays? Will the message of future years be: 'work hard on week days and work harder on Sundays'?

* * *

In this country we set great store by initials of words, so much so that like the Czarina's violet of Tolstoy's story by the same name, the original word or words for which the initials stand are half forgotten, just as the soldiers in the story had forgotten that they were supposed to be guarding the Czarina's violet on the lawns of the regal palace. The abbreviations increase and the string of the letters of the alphabet becomes longer as one travels from the periphery towards the capital which is the centre. One is bewildered by the army of these, such as F.R., D.F.A., R.R., T.R., P.I.O. and the like. One often comes across an office note (O.N. rather) saying "DFA in reply to F.R. is put up for approval through F.A. (Adm.). Director may please advise whether U.S. (SE3) be requested to consult AFA before it is put up to DEA(SE) and J.S. (I)." To wade one's way through this labyrinth of initials requires strenuous mental

effort on the part of one new to the ways of officialdom in the capital. It is in line with this, that the Directorate of Extension Programmes for Secondary Education has become DEPSE. One has got used to it but the sound, either with the letters of the alphabet pronounced separately or with their being grouped into a two syllabled word, is not pleasing to the ear. There is something clumsy about either sound, suggesting an organisation that is too huge and has not got into shape yet. This may be a true description of the Directorate but when one is in the very midst of it, one finds it difficult to accept it. To share with the Directorate the same fate arising out of the inveterate habit of making initials do duty for the full word are the NIBE (The National Institute of Basic Education) and the NIAVE (The National Institute of Audio-Visual Education). The latter has just escaped being 'naive'!

* * *

We are very often asked by educationists as well as others what the Directorate's field and scope of work are. The questioner knows something about Secondary Education and has heard of the re-construction of secondary education and of multipurpose and higher secondary schools. So he wonders whether we are responsible for recognising higher secondary and multipurpose schools or for giving them grants for recurring and non-recurring expenditure. Perplexed by our answer in the negative, he continues his questioning further and refuses to be satisfied by the answer that we are responsible for extension work in institutions concerned with secondary education. He wants to know what exactly is meant by extension work and we are hard put to it! We give him a list of our activities—setting up, aiding and guiding Extension Services Departments in secondary teachers' colleges; organising seminars, conferences and workshops for Teachers, Headmasters and Educational Officers; encouraging schools to undertake experimental projects; inducing schools to organise science clubs, strengthening selected multipurpose schools by providing additional equipment and guidance; undertaking the reform of examinations, etc. It is a rigmarole which we repeat at all parties and receptions when we are put through our paces. But this formidable and impressive list of our activities brings no satisfaction to our interlocutor. He feels he has lost the wood for the trees and comes back again to that perplexing word 'Extension'. "But why are all these activities considered to be Extension Programmes", he asks. "What is the special significance of the word 'Extension'?" We refer to the G.R. which set up the Directorate, but he is not satisfied. Wearied with this struggle of explaining our field of work in terms of the name of our office, we realise some of the advantages of the old terminology when this office was the executive arm, so to speak, of the All India Council for Secondary Education. One just accepted that phrase and took things for granted. One's intellectual curiosity about the

Council's functions was not roused. The new appellation is more specific and like all specific words it raises a multiplicity of questions in an inquiring mind. Shall we say that extension is a word which is being used in a new and specific sense, not only in education but in Agriculture and other fields as well, to include within its scope such work as is beyond routine practices, work which aims at bringing about qualitative improvement, by entending to institutions the results of the knowledge or experience acquired in a seat of learning or in a central place ?

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Greetings

With this issue , *Teacher Education* commences the fourth year of its existence. We take this opportunity to express our very sincere thanks to all those who have extended their support to this venture of ours in educational journalism. We wish all our contributors, subscribers and readers a very happy and prosperous 1960, and look forward to their continued support during the year.

—Editor

EXTENSION SERVICES NEWSLETTER

NORTHERN ZONE

The Extension Services Department of the Government Constructive College, Lucknow, organised a six-day training course for fifteen teachers in the use of audio-visual aids. The Co-ordinator visited five schools to discuss problems related to the teaching of English and science. Two meetings of teachers at Hardoi and Sitapur discussed ways of organising extension activities in the secondary schools of these districts.

Ten lecturers in social studies from the Training Colleges in Allahabad attended a workshop on evaluation organised by *the Extension Services Department, Allahabad.* The Centre also organised another evaluation workshop for teachers of History, Geography and Civics, and an advanced level evaluation workshop in social studies. The Co-ordinator visited eight schools for trying out the test-items prepared by the Examination Unit.

The Extension Services Department, Agra, convened a meeting of the heads of the high and higher secondary schools of Agra district under the presidentship of the Vice-Chancellor of the Agra University, to discuss the programme of the Examination Unit attached to the Department. Talks on evaluation techniques were organised for the benefit of the teacher trainees of the Women's Training College, Dayal Bagh, Agra, and the B.R. College of Education, Agra. The Department has taken up a programme of intensive work with six institutions in the district.

The Extension Services Department of the Isabella Thoburn College, Lucknow, administered questionnaires in Hindi and Home-Science in order to prepare courses in the subjects to be organised later. The Department also encouraged schools to undertake small class room projects. The Co-ordinator of the Department continued to visit schools in connection with follow-up programmes.

The Extension Services Department, Raipur, confined its activities during the month to film shows and talks on educational problems.

NORTH-WESTERN ZONE

Twelve teachers attended a meeting of the subject association in general science held under the auspices of *the Extension Services Department, Jullundur* A symposium on the organisation of laboratory work was held on the occasion. A one-week state-level evaluation workshop in general

science was attended by eight teachers. The Co-ordinator visited four schools, when he discussed with school teachers cumulative Records and general problems arising out of the organisation of the higher secondary schools. The Department also organised a Film Festival for one week and film shows in three local schools.

The Department of Extension Services, Chandigarh, organised a training course in photography for thirteen teachers from local schools. Another ten-day training course in the use and operation of projective aids was held under the direction of the Co-ordinator. At the monthly meeting of English teachers, the participants discussed methods for improving spoken English.

A state-level advanced evaluation workshop held at *the Extension Services Department, Ferozepur,* was attended by eleven teachers. Another two-day workshop on internal assessment was organised for the benefit of fifty teachers of secondary schools of the district. A seminar attended by thirty participants to discuss current educational problems and five school visits were the other activities of the month.

The Co-ordinator of *the Department of Extension Services, Udaipur,* participated in four seminars in English organised by the Department of Education, Rajasthan. The participants discussed among other topics the structural approach to the teaching of English, English phonetics and the construction of new type tests in the language. The Co-ordinator also worked as one of the consultants at the nine-day evaluation workshop for the teachers of the Govardhan Multipurpose Higher Secondary School, Nathdwara. The participants prepared test material which will be examined further in consultation with the staff of the Training College. The central science club organised by the Department continued to do useful work. Six film-shows were arranged during the period under report in different schools.

A three-day course in the use and operation of the audio-visual aids was arranged by *the Extension Services Department of the Teachers' Training College, Bikaner.* The Department also organised two symposia on Basic Education and the teaching of Commerce in secondary schools and four extension talks on various subjects. Another important activity of the Department was the establishment of 'Teacher Clubs for arts and crafts teachers.

The Department of Extension Services, Central Institute of Education, Delhi, arranged two seminars during the month, the first for the teachers of commerce, and the second on the maintenance of cumulative records. The Department also organised a workshop on evaluation and another on the School Beautiful. Meetings of the heads of schools discussed the planning of experimental projects in schools, the organisation of science clubs, and follow-up work in schools. The research study circle under the guidance of Dr. S.M. Corey of Columbia University, discussed 'Action Research to improve school practices'. A meeting of the teachers' study circle listened

to an expert talk on the use of Audio-Visual methods for India's development programmes. The Department also participated in the exhibition arranged by the Delhi University during its convocation.

The Co-ordinator of *the Extension Services Department, Teachers' College, Jamia Millia Islamia, New Delhi,* visited eighteen schools to assist them in the organisation of science clubs and experimental projects. Two conferences of the teachers of Senior Basic schools considered ways of raising the standard of teaching and creating greater professional interest among teachers. A symposium on 'Basic Education in Practice' organised on the occasion of the educational festival of the Jamia Millia, was attended by two hundred teachers and educational workers of the area. Other activities of the Department include organisation of mobile courses, demontration lessons and library and audio-visual services.

EASTERN ZONE

A seminar on social studies was arranged by *the Extension Services Department, Turki.* Special attention was devoted to the teaching of crafts. The Department also organised a course on the 'School Beautiful'. School visits rendered guidance services.

The Extension Services Department, Bhagalpur, arranged a course in English for teachers of secondary schools of Monghyr District. The course included a demonstration lesson. A six-day state-level evaluation workshop in social studies was held under the auspices of the Department. The Department also organised a meeting of the Hindi study circle where the Co-ordinator read a paper on the teaching of Hindi after Independence. Four schools were visited during the month.

The Co-ordinator of *the Extension Services Department, Cuttack,* visited eight schools and discussed with the members of the staff methods for improving teaching in different subjects. Library and audio-visual services were rendered as usual to schools in the area.

The part-time course in Geography arranged by *the Extension Services Department, David Hare Training College, Calcutta,* was continued during this month. The week-end seminar on History was resumed after the vacation. A vacation course for teachers of secondary schools in the different districts of West Bengal was completed during the month. The members of the central science club met to draw up a programme of activities.

The Department of Extension Services, Institute of Education for Women, Alipore, Calcutta, convened a meeting of headmistresses of higher secondary schools to finalise the reports on the syllabi of certain subjects. The Co-ordinator also visited six schools during the month.

A six-day refresher course for teachers of mathematics (elective) arranged by *the Extension Services Department, Government Training*

College, Hooghly, was attended by twenty-two teachers from ten schools. The participants were helped in the preparation of new type tests in the subject. At a two-day afternoon seminar which was attended by sixty-two participants, the topics discussed were: (a) Planning of out-of-school activities (b) Problems arising out of the teaching of elective subjects ; (c) The teaching of social sciences; (d) The measures for securing better co-operation from the teacher (e) The teaching of English in Class V.

CENTRAL ZONE

The Co-ordinator of *the Department of Extension Services, Hyderabad,* conducted two courses on the teaching of English by the structural approach. He visited eight schools in connection with follow-up work in English and to render help in the organisation of science clubs. The Department arranged four extension lectures, exhibited twelve films and loaned ninety books during the month.

Under the joint auspices of *the Extension Services Department, Secondary Training College, Bombay,* and the British Council, a eleven-day course was organised for fifty teachers of English. A one-week workshop for fifteen teachers of multipurpose schools was conducted by Mr. Sterling and Dr (Miss) I.R. Wells, T.C.M. Consultants attached to the Directorate. Two talks on Mental Health were also arranged during the month.

A four-day Evaluation Workshop in social studies was organised by *the Department of Extension Services, Baroda.* A follow-up workshop of the teachers of eight schools of Panch Mahals district who are carrying out an experiment on the integrated teaching of social studies was held for two days. In the light of their experience, the participants planned the remaining units of the subject. Professor L.A. Hill of the British Council gave a talk on how the English teacher can be helped to use the structural approach effectively. He also inaugurated the Baroda English Teachers' Association on the occasion. A meeting of mathematics teachers discussed the reports of the remedial programme undertaken in the schools.

The Extension Services Department, A.G. Teachers' College, Ahmedabad, arranged a workshop in evaluation techniques for the trainees of the college. Under the direction of the Evaluation Officer, a three-day workshop for teachers of seven local schools focussed attention on specific teaching units and their planning, keeping in view the evaluation programme.

A Sunday-seminar for teachers who had participated in the social studies evaluation workshop in July last was another feature of the month. The Co-ordinator visited eight schools to discuss project work and evaluation technique.

An advanced state-level workshop on Evaluation in General Science, was conducted by *the Extension Services*

Department, Nagpur. A batch of fourteen other teachers selected for the orientation workshop also participated. The Evaluation Officer also held a meeting to orientate the training college faculty to the new concept of evaluation. The Department helped in the establishment of the Teachers' Study Club in a local school. The Co-ordinator of the Department visited three schools during the month.

SOUTHERN ZONE

The Department of Extension Services, St. Christopher's Training College, Madras, continued the course on black board work begun earlier. Preparations were made for seminars on Physical Education and Home Science proposed to be held in December. The library and audio-visual services continued as usual.

A week-end course on the teaching of English conducted by *the Department of Extension Services, Perianaickenpalayam,* was attended by forty teachers. A four-day workshop in social studies at which sixteen teachers participated, was another activity of the month. Promotion of science clubs and experimental projects were discussed at conferences with headmasters.

The Department of Extension Services, Meston Training College, Madras, organised seminars for over thirty-five teachers of standard VIII at four centres in North Arcot District. The participants not only discussed the syllabi in social studies, general science and mathematics but also prepared test material in the subjects. The Co-ordinator utilised school visits for follow-up work, in which he received valuable co-operation from the President of the District Teachers' Guild. The Department also organised a conference of the headmasters and physical education teachers of the Vellore district when problems of English teaching were discussed. The participants also considered how best they could organise physical education in their schools. Shri S. Natarajan who was present at the conference spoke on the need for improving internal evaluation and the importance of development of character through physical education.

The weekly English language course was conducted under the auspices of *the Department of Extension Services, Annamalai University,* for the benefit of local teachers. A state-level evaluation workshop in social studies was attended by twelve teachers selected from different schools. The Department also organised a three-day course on the teaching of English for ten teachers.

Nine teachers participated in a three-day course on the teaching of English conducted by *the Department of Extension Services, Madurai.* In addition to discussion on the structural approach to the teaching of English, model lessons were also arranged on the occasion. At a seminar on the teaching of social studies, emphasis

was placed on the adoption of modern evaluation techniques and the value of audio-visual aids in the teaching of the subject. A course on audio-visual education, a meeting of the central science club to discuss arrangements for the third generals cience exhibition, and school visits for follow-up work were the other activities of the month.

Two week-end courses were arranged during the month by *the Department of Extension Services, Teachers' College, Mysore*, the first attended by fifty-four teachers of mathematics and geography, and the second by forty-two teachers of science. In addition to dealing with their respective subjects, the participants in both considered problems of higher secondary schools.

The Co-ordinator of *the Department of Extension Services, Mangalore*, visited sixteen schools to discuss the organisation of science clubs and the teaching of arts and crafts in schools. The Department organised an educational exhibition of maps, charts and models and another on books.

Two week-end courses were organised during the month by *the Department of Extension Services, R.V. Teachers College, Mangalore.* The first which was attended by forty teachers, dealt largely with the teaching of English in schools. The other which was attended by thirty teachers, discussed the teaching of English history. Model lessons were arranged on the two occasions. Two evaluation workshops in general science and general mathematics were conducted by Evaluation Officers of the Directorate. Twenty-seven teachers participated in these workshops. The Co-ordinator visited five high schools to acquaint them with the activities of the Department.

The Co-ordinator of *the Department of Extension Serrices, Government Training College, Trivandrum*, paid visits to fourteen high schools for different purposes. Two orientations workshops in English and general science were conducted by the Evaluation Officers. The workshops lasted for four days and were attended in all by twenty-nine teachers. The participants worked out a number of test items and later translated them into Malayalam.

The Co-ordinator of *the Department of Extension Services, Government Training College, Kozhikode*, visited seventeen schools during the month to discuss activities of science clubs and the planning of school experimental projects. The Co-ordinator addressed two conferences of headmasters of secondary schools about the activities of the Department. He also explained to them the work of the Examination Unit.

* * *

EXTENSION HIGHLIGHTS

The Teaching of English

The Department of Extension Services of Isabella Thoburn College, Lucknow, organised a six-day course on the teaching of English for thirty-six teachers of the subject. Conducted

by the Education Officers of the British Council, the course included demonstration lessons on the teaching English to beginners, ear and speech training, the teaching of poetry and controlled composition.

Challenging Assignments

A workshop on 'Challenging Assignments' was held under the auspices of *the Extension Services Department of the Central Institute of Education, Delhi*, for the benefit of the staff of three local schools. The workshop was directed by Shri P.K. Roy, Reader in Education, at the Institute. The participants were guided in the construction of challenging and stimulating assignments in different subject areas.

A new approach to In-service training

The Department of Extension Services, Faculty of Education and Psychology, Baroda, launched a new programme for in-service training of teachers, under which six teachers from rural schools were invited to participate in the working of the University Experimental School for a period of four days. Under the guidance of the Principal of school, these teachers studied the project way of teaching, the system of periodical tests, the technique of maintaining cumulative record cards, the library service of the school, the school assembly and other co-curriculur activities of the school, the remedial programmes, the science club and the school museum.

Improving the teaching of English

The Department of Extension Services, Meston Training College, Madras, arranged visits to nine secondary schools by Dr. (Miss) J.F. Forrester to bring about improvement in the teaching of English. In each school Dr. Forrester observed lessons given by school teachers, discussed with individual teacher ways and means of improving the teaching techniques, gave demonstration lessons and addressed general conferences of the teachers. Problems of backward pupils and the advantage of group methods were special points of discussion. This intensive compaign has been extremely useful to headmasters and teachers of the schools.

Bhopal Teachers' Club

The Extension Services Department, Bhopal, has established a Teachers' Club to provide the local teachers opportunities for entertainment, recreation, and professional and cultural growth. The club aims to organise educational excursions, and annual picnics, conduct activities for the professional growth of teachers, and start Teachers' Cooperatives. Members meet on Sundays and engage themselves in one or more of the following activities: use and maintaince of audio-visual aids in teaching, science club activities, photography club, fine arts, discussions and debates, cultural programmes, library reading, indoor and outdoor games.

Utilisation of Vocational Guidance Period in Standard X

A follow-up course on 'the Utilisation of the Vocational Guidance Period

in Standard X' was conducted by *the Department of Extension Services, Tilak College of Education, Poona,* in August 1959. Shri M. H. Pimpalkhare, Assistant Vocational Guidance Officer, Poona, directed the course. The purpose of the course was to follow-up the progress of the activities suggested in a previous course held earlier in July 1958.

The Government of Bombay had established the Vocational Guidance Bureau at Bombay, in the year 1950. The bureau had trained nearly a thousand career-masters, who were disseminating occupational information in the schools. The Universities of Bombay, Poona, and Baroda had also introduced Educational and Vocational Guidance as an optional subject for the B.T. and B.Ed. examinations. The subject was, however, not given a regular place in the time-table till February 1958. Considering the importance of the subject and the availability of a large number of trained career-masters, the Director of Education requested the district educational inspectors to inform schools that vocational guidance should be taken up as a part of the social and cultural activities in schools. The circular also stated that schools should be allowed to adjust a period a week for vocational guidance with time for physical education, social and cultural activities in standard X. Many schools took up the suggestion and introduced the subject in this class from the academic year beginning June 1958.

The introduction of this new subject created many problems. What was the portion to be covered ? How was adequate time to be found for the programme? These were some of the queries for which answers had to be found. Short courses were conducted at Bombay, Poona etc., to guide the careers masters in their work. Although these courses achieved their purpose in a generally satisfactory manner, it was, however, found later on that all the participants were not progressing equally well. A follow-up course was therefore organised where these participants met and discussed the following problems :—

(i) Schools generally found it difficult to get a special room to serve as information centre. The school library or the reading room was more suitable for displaying publications and posters. It was necessary to have most up-to-date and recent publications on occupational information. Regarding visits it was suggested that only a few selected students be taken to visit places like the National Defence Academy. It was pointed out in this connection that any technique, which does not bring out the desired result, may not be used. It was necessary that the period should be given division-wise and not class-wise as was being done in some schools. It was brought to the notice of the participants that monographs and publications were available in the regional languages. Information regarding the various sources from where the aids could be obtained was also given to the workshop.

(ii) The topic 'Choosing a Career'

needed a different treatment in girls' high schools and mixed schools. It was also necessary to give concrete examples while discussing topics such as the importance of the proper choice of a career, individual differences, kinds of jobs and how they differed from one another, and factors to be considered in choosing one's career.

(iii) Under financial aid and apprentice schemes, attention was drawn to the various sources giving information about scholarships, loan scholarships, stipends and apprentice schemes. Under the scheme, the students actually work in factories, mills etc., and receive practical training in the evening classes. It was suggested that some local industrial concerns be requested to start similar schemes.

(iv) The group on the 'University Courses' mentioned that there was no need of giving details of courses conducted at various other Universities. Special emphasis had to be given to the fact that every one was not likely to benefit by higher education. Special mention should be made of the various degree courses which can be taken up immediately after the S.S.C. Examination.

(v) The group on 'Non-University Courses' discussed the problem of middle classes, which cannot take up any education. It was necessary to acquaint the students with the large number of employment opportunities available at present.

(vi) The group of women teachers reported that girls were not interested in careers and that there were many restrictions on their choice. It was agreed that it may not be necessary for a girl to take up a career but she may keep herself informed of the opportunities open to her, in case the need for a career arises. It was necessary to bring out special publications for girls.

From the discussions it was found that it was too early to take stock of the progress of proper utilisation of the period assigned to vocational guidance in Std. X. It may be necessary to hold such short courses every year, if not every term. It was also found that many schools have to go a long way in introducing the subject. The aim of the subject is to give the students occupational and educational orientation—a service which will serve a twofold purpose of an all round education and preparation for a future career.

PUBLICATIONS

The following publications were brought out by the Extension Services Departments during November 1959 :

Name of the Department	Name of the Publication
1. Dev Samaj College for Women, Ferozepur City.	Report of the Workshop in Social Studies.

2.	Central Institute of Education, Delhi.	1. Newsletter No.: 32, September, 1959. 2. Report on the Progress in teaching English.
3.	Teachers' Training College, Turki.	'The Glorious Dawn'
4.	R.N. Training College, Cuttack.	Newsletter (Publ. No : 22) Report of the activities of the Science Clubs in the State.
5.	University Training College, Nagpur.	A report on the workshop on Experimental Projects.
6.	Shri Ramakrishna Mission Vidayalaya Teachers' College, Coimbatore.	1. A bulletin on Children's Art Exhibition. 2. Newsletter No : 10.
7.	St. Ann's Training College, Mangalore.	Bulletin on Science Clubs—their organisation and activities.
8.	R. V. Teachers' Training College, Bangalore.	A report of the English Refresher Course held in April 1959.

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TEACHERS' ORGANISATIONS IN INDIA

S. Natarajan

Shri S. Natarajan, M.L.C., Madras, formerly Director of the Field Advisory Staff of the A.I.C.S.E., and now Vice-President of the World Confederation of Organisations of the Teaching Profession (WCOTP) needs no introduction. In this article, he traces with, a characteristic sweep, the origin, development and growth of teachers' organisations at various levels in the country, and indicates the direction in which their activities require to be strengthened. With his long service in the field of education and his close association with national and international teachers' organisations, his observations on their role in educational progress carry special weight. —Editor

Teachers' organisations in India are mostly still in a formative stage, even though some of them can claim a history of well-over half a century. This tardiness in the build-up of State or National Organisations is due to the multiplicity of managements operating in the country—Government, local bodies, (District Boards, Municipalities and Panchayat Boards), philanthropic societies, religious missions and other private organisations. Also, before Independence, the Government of the day viewed with suspicion any attempt on the part of teachers to organise themselves either for professional study of educational problems or for improving their service conditions. But despite these obstacles, teachers' organisations grew up though languidly, and after Independence there was a new urge among teachers to bind themselves together to secure not only better service conditions and salary scales but a larger part in the shaping and working of educational policies.

In the past education was merely an appendage to administration, whose interest was to produce only that amount of man-power that was needed for carrying on its work. From 1920 onwards, with the introduction of partial self-government, the need for better education with a wider purpose came to be felt by the public, and teachers' organisations served as the vehicle of public opinion. These organisations insisted on national goals for education, and suggested improvement in programmes. But as the Educa-

tion Ministries of the States had to work with a limited autonomy, not much was achieved, and a sense of frustration fell over teachers' organisations. To this frustration must be added the uncertainties of service tenure, the very low scale of emoluments and the many irksome conditions of service. It was not surprising, therefore, that the main pre-occupation of teachers' organisations in different parts of the country came to be mainly a fight for better conditions of service and of salary scales. However, with the coming of Independence, teachers keenly realised that they had a vital part to play in the entire education programme of the country. They saw the need for a great overhauling of the education system, for defining goals at different stages of education, and for an integrated approach to the total problem.

Today, with the politician and the administrator wholly engaged in the economic development of the country, we need a group of people who can devote undivided time and attention to the development of its human resources. India is rich in its many untapped natural resources. It is even richer in its human resources. But in planning the economic development of the country, it would be a sad mistake if the potentialities of its human resources are not fully tapped. For, natural resources can be developed into actual economy only by the ability of the men set to that task. This ability is secured only by education. But education needs money, and the present resources of the country can hardly sustain and support a structure of education adequate for the country. There is, therefore, a tendency to shy away from this problem and get pre-occupied with the development of power and industries. The duty has thus devolved upon teachers to turn and focus public attention on this most important need, namely, the development of human resources.

Teachers, by virtue of their profession, are in a unique position to sense the swift changes in the world and to visualise future needs. Hence their organisations are the best agencies for presenting the educational needs of the country to the public, and it is they that can best help the administration in framing educational policies and programmes.

It is a happy augury that teachers' organisations in India are devoting more and more attention to this professional aspect. They are now anxious to have more share in the *Councils and Committees which* Governments set up for the study of educational problems, and they are willing to make available to them the results of their study and examination of problems. We may hope that administration at different levels will make use of teachers' organisations, thus give them their due place in national reconstruction.

Teachers' organisations in India are more or less on a federal basis. The normal pattern is for teachers of schools to form into an association. Associations of different schools in an area like a District federate into District Organisations and these again federate

into a State Organisation. The various State Organisations together constitute the All India Federation of Educational Associations. But many of these District and State Organisations still continue in compartments such as secondary teachers' associations, elementary teachers' associations, university teachers' associations, and associations of headmasters and principals of secondary schools and of training colleges. Only in one State, have the teachers of all grades united in a single organisation at the district and the State levels. The All India Federation of Educational Associations desires to have such an integrated single organisation in each State. It will take some time to bring about such an integration in all the states. However, at its Annual Educational Conferences the All India Federation offers through its eighteen sections opportunities for different categories of teachers to meet and consider problems appropriate to the stage of education with which they are concerned and the responsibilities attached thereto.

Some of our organisations meet annually or oftener, and discuss problems connected with curriculum, methods of teaching, evaluation, and problems of school organisation and administration. A few States' organisations follow up these larger conferences by special group meetings to consider specific problems related to the several subjects. Exhibitions of pupils' work and teaching aids are regular features of these conferences and contribute considerably to their prefessional value. The South India Teachers' Union sponsors an annual Education Week, which acquaints the public with the work of the schools and secures their interest and support in school programmes.

Organisations such as the All-Bengal Teachers' Association, the West Bengal Secondary Teachers' Association the West Bengal Headmasters' Association, U.P. Secondary Teachers' Association, Federation of Bombay Headmasters' Associations, the Mysore Secondary Education League and the South India Teachers' Union, publish quarterly or monthly journals, which not only report their activities but also contain articles of educational experiments and practices. These journals help the associations in maintaining close contact with teachers, in stimulating their interest in the work and in keeping them informed of how their colleagues in India and abroad are dealing with similar professional problems. These journals, however, cannot claim to have gained the stature of educational journals in other progressive countries, the difficulties of finance and lack of full time personnel limiting their efforts. That their efforts are sustained, is in itself a source of hope.

Recently, the South India Teachers' Union set up a Council of Education Research and a Publications Council as subsidiary organisations, entirely autonomous and registered under the Societies Registration Act and Indian Council's Act respectively. These are expressions of the awareness of teachers not only of the need for professional study of educational problems, but also of their urge to contribute to the pre-

paration of reading materials.

If the Education Ministries of the States and the Centre should translate into action their convictions on teachers' salaries and service conditions, and thus remove one of the most pressing anxieties of teachers, then teachers' organisations will be in a happier position to function as professional bodies, to consider educational problems educationally, and to help achieve better standards of education. It will also be a worthwhile investment for Governments to support and encourage teachers' organisations through some form of financial assistance.

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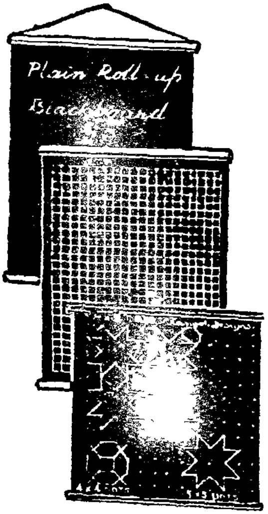

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RE-EDUCATING THE TEACHER

C.C. Shah

Shri C.C. Shah is the Principal of Jeevan Bharati, Surat, an institution which started twenty years ago, and which he has been conducting on activity-centred lines. As president of the Federation of Headmasters' Associations, Bombdy, he put new life into the Federation's activities, directing them to problems of educational significance rather than of mere administration. —Editor

Plea for a Silent Revolution

In education, as in other fields of life in India, we are passing through an unprecedented transformation. In secondary education the process began with the publication of the report of the Secondary Education Commission in 1953. The aims and objectives of education have been reorientated ; a more comprehensive task has been envisaged for teachers ; and new dynamic methods of teaching to suit the new ends have been suggested.

An enchanting picture of the new school emerges from this investigation. The Commission says :

> "....The Secondary School of the future must be transformed into an *activity school,* because activity has an irresistable appeal for every normal child and his natural path to the goal of knowledge and culture............
>
> ....What we have advocated is, in brief, a transformation of the schools into social communities where the healthy normal motives and methods of group work are in operation and children have an opportunity of learning by doing, of gaining meaningful experiences, and thereby being trained in the supreme *art of living.*"

In short this is a plea for bringing about a silent revolution in the field of education.

Education-A Joint Co-operative Venture

We are still far behind such a school. For many of us it is just a dream at present. However, if we hope for the realisation of this good and happy dream, we will not only have to cultivate an abiding faith in an activity-centred school, but we will have to dedicate ourselves to this difficult task.

The concept of the Indian secon-

dary school of tomorrow is radically different from that of the present day school. So also must be its programme and its implementation. I believe that unless we, teachers and headmasters, undertake this task earnestly and with full understanding and imagination, there is hardly any chance of the fulfilment of our objective.

The Headmaster must provide the necessary leadership in converting his school into an activity school and inspire his co-workers to strive for that purpose. In order that every teacher may identify himself with the project, it will be necessary for the head of the school to provide opportunities to him for active participation in the formulation of the project and its implementation. That is the universally accepted democratic way and it will ensure the active and wholehearted support of every one concerned. After all, it is recognised on all hands that education is a joint, co-operative venture in which the administrator, principal and teacher must be joint and equal collaborators.

This position has to be clearly understood and accepted, not only in theory but in actual practice too, by all concerned—that is, the officers of the departments of education, and the headmasters and teachers, who, through an unbroken practice or usage over several decades, have become very docile and submissive. The administrator must part with and share some of his authority with the headmaster and teacher and the latter must assume greater initiative and responsibility in this new venture. Only then will the balance be struck and a climate created for the establishment of activity schools in India.

The Role of Professional Organisations

I have no doubt that the professional organisations of headmasters and teachers have a very important role to play in bringing about this great transformation. I expect that these organisations will be close-knit, powerful bodies, enjoying the goodwill and support of most of our professional men and inspired by the fervour of an educational reformist. Their principal workers, I again assume, will be honestly subscribing to the educational philosophy of the activity school and must be willing to exert themselves for rejuvenating our schools by adopting a dynamic and comprehensive programme of education. I regard those as the pre-requisites of any substantial contribution which these associations may be able to make to this difficult transformation, especially because very often in these organisations we have concentrated our energies on improving the conditions of service of teachers and on other administrative problems to the detriment of sound educational work that we had a chance of doing. If these associations have an important contribution to make to the educational development of our schools, as I believe they have, the emphasis in their programmes must be shifted to sound educational work which will help us in ushering in the new school in many parts of the country.

I visualise that the headmasters' and teachers' associations have a triple role to play :

(*i*) *In the first place* such associations must collaborate with the department of education in formulating developmental projects and in providing an appropriate administrative set up for the same.

(ii) Secondly, they must do all that is possible for them to do, to train and equip the teaching faculty for the fulfilment of the new tasks.

(iii) Lastly, these associations may also devise ways and means of establishing effective relationship between the school, home and community so that a fuller appreciation may prevail among them about what education aspires to do for the individual and the community.

I shall now briefly deal with these three aspects of the work of professional organisations.

Participation in Planning

It is customary in India to hand over to teachers departmentally prepared plans, projects and curricula, for implementation. Not only do teachers, who will be responsible for working them out, have no say in the matter, but hardly ever is any effort made to orientate them in the implementation of these plans.

To ensure full success of new projects, it will be necessary to associate the representatives of headmasters' and teachers' associations in their planning from the earliest stage. This should be done wholeheartedly, without any mental reservation on the part of the department, I do not see any reason why even *final decisions, could not* be taken jointly. I know of at least one instance in which the officers of the education department of the Bombay State and some headmasters collaborated for fifteen days in preparing a scheme for converting secondary schools in the State into higher secondary schools. The result was very satisfactory.

Planning with understanding and imagination is a highly technical and difficult task. Those who participate in it get a good insight into the numerous problems involved in it. The advantage of such a participation is *that* those who do so will identify themselves with that project and will be interested in seeing it through.

Apart from this, it would also be worthwhile for headmasters' and teachers' associations sometimes to *initiate on their own*, a study of some educational problem or project and place the results of their investigation before their members as well as the department. Associations in the U.K. and U.S.A. are doing much useful work which is worthy of emulation by us. Every association may have a 'planning forum' which may undertake educational surveys, collect reliable data and also formulate or check up new proposals for any experiment or reform for being worked out in their schools. *A contribution* of this nature, howsoever small it may be, towards reforming our out-moded

system of education, will not only enhance the prestige of teachers but will also go a long way in speeding up the transformation that we have in view.

Re-educating the Teacher

One of the problems for the administrator that defies satisfactory solution and throws out a challenge to us is that of securing the active co-operation of the headmaster as well as the teacher. If we have a look at our teaching personnel, it will be seen that even now a large percentage of teachers have not only not received any professional training but have been allowed to do their work without any guidance worth the name. Even the trained teachers, a large number of them at any rate, need to be re-educated, especially when we are trying to alter our basic approach to the child. The teacher needs to be imbued with the philosophy of the new activity-centred education which is designed to provide living experiences to the child and to train him in the art of living, needs to go deep down in the grains of the teacher so that he may develop an abiding faith and an absorbing interest in this new way of educating pupils entrusted to his care. The traditional way of teaching has to give place to the new way of learning.

Shall we accept the challenge? Who will do it? The State Departments of Education have no machinery to do this job. The Departments of Extension Services, recently attached to many of our Training Colleges, are desperately trying to tackle this problem with some noticeable success. But their resources are limited and their field of operation is very large.

Under the circumstances. I feel that the teachers' organisations, especially those of headmasters, are easily the most suitable agency for this work. The task of educating and re-educating thousands of teachers is not easy. It is vast as well as stupendous. But if a programme is drawn up and all organisations pledge themselves to work it out, I have no doubt that we will succeed in the next few years to give a new outlook on education to many of our teachers. If we can remove ignorance and indifference, lack of adequate understanding and earnestness from among our fellow-workers and give them the new techniques of educating the child, we will have given a very good start to our activity school.

How shall we do this? A progressive headmaster may be relied upon, through personal contacts, to build up a relationship with his colleagues on the staff which will break through the conventional barriers that usually separate them. The headmaster should strive to secure their active participation in the discussions that may take place on various school problems. He will have to draw them out from their shell and make them realise that each one of them has a contribution to make in planning our programme and in the solution of our problems. If through free and frank exchange of views and adoption of the technique of group discussions, the headmaster

is able to revitalise the teachers' entire thinking we should have the teacher that we want for our schools of tomorrow.

This will be a slow but sure process of re-educating the teacher. Perhaps it will be necessary to re-educate our headmasters first. The headmasters' organisations, more particularly at the State level, may take a cue from the N.E.F. World Conference, which recently met at Delhi, and adopt the technique of leaderless group discussions in their seminars and conferences. I envisage that a chain of seminars organised at different levels for various persons engaged in our educational hierarchy, organised on these lines, will work wonderfully well. There should be good planning and tactful handling. If we can share our experiences at such seminars with our colleagues in our own institution or locality by organising seminars and group discussions on similar lines, we will surely succeed in creating a band of devoted teachers, with an awareness of the tasks lying ahead of them.

District and local associations of headmasters and teachers may also work in close collaboration with each other as well as with the Department of Extension Services in their area, and put through a pre-planned programme of seminars and workshops, short-term refresher courses, evening or week-end study circles, symposia, talks, exhibitions, bulletins, journals, pamphlets, books etc., for strengthening the basic educational philosophy and faith of the teaching faculty. The teacher organisations will more than justify their existence if they succeed in building up a forum for unending, purposeful collaboration for educational tasks of all types. There is always such a good deal to do that the organisers will always have to draw up their programme for the year with an eye on the needs of the schools and teacher they wish to serve and also the time available to them.

Teacher organisations may also fruitfully engage themselves in the initial stages at least, in discussing programmes of co-curricular activities for pupils. A large majority of our schools are yet mainly instructional. It will therefore be necessary, for some time to come, to deal with this aspect of our work also which is so essential in building up our activity schools. It is this programme that will provide opportunities to our pupils for training in the art of full and reasonable living. Hence the need for careful planning and execution.

Seeking Co-operation of the Home and Community

There is still a third sector in education which I have not referred to so far. If the teacher and the school form the main pivot on which the full development of the child rests the parent and the home cannot be regarded as negligible contributory factors. We have to reckon with them and harmonise their influence with that of the teacher and the school.

The need for a close collaboration between the school and the home has been universally accepted. Similarly

it is acknowledged on all hands that no school can now exist in isolation and the school and the community must interact fruitfully.

Education of the young generation is the responsibility of the entire community. Parents and people should therefore be acquainted with the gospel of new education. They should participate in determining the educational needs of the community and co-operate with the school in formulating an over-all programme for the education of the whole man.

Teacher organisations can usefully provide the link between the school, home and community. They can do a lot in popularising the principles and practices of new education, by organising lectures, symposia, small group meetings, etc. They may help in establishing parent-teachers' associations, preferably school-wise, with an active programme for mutual help and participation. The press and the radio may also provide good media for the purpose.

Here again the personal contact is most important. In our country, parents usually remain indifferent to the work that is going on in the school. It will therefore be the responsibility of the teacher to approach parents and create in them a live interest in the problems of the education of their children. Educating the parent is perhaps more difficult than educating or re-educating the teacher. But there is no escape from it, if our dream of educating the child in the art of full and responsible living is ever to be realised. The process will be slow and sometimes tortuous, but I am sure it will yield good dividends.

Conclusion

I hope I have not prescribed too high and difficult a target for teacher organisations. During the last twenty-five years that I have been associated with the teacher movement in the Bombay State, our endeavour has been to give them an educational programme. The Bombay State Federation of Headmasters' Associations, which represents about 20 district associations and 800 headmasters of secondary schools, has succeeded during the last five years, in formulating a gradually expanding programme of educational work and stimulating the affiliated associations to do likewise. Though apparently difficult, given a progressive, imaginative and enterprising leadership and a determination to forge ahead, I am confident the task is not impossible. If we pursue it steadily and with confidence, we will soon have the proud privilege of ushering in a new era in Indian education.

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APPROACHES TO CURRICULAR DEVELOPMENT

D.M. Mukherjee

Headmaster of a progressive school in Calcutta, Shri D.M. Mukherjee is one of the principals who has been working actively with the Extension Services Department in that city. He is specially interested in the problem of curriculum development, in which he believes that teachers have a great role to play. —Editor

The most significant modern approach to education—specially the elementary and secondary education—is that the child is the centre of all education. This child-centred education demands that the teachers should supply the nurture suited for individual growth of the child and that all children should not be forced into the same mould.

This new outlook in education aims at fitting every individual to contribute as best as he can to the development of the society and the nation. The purpose of education has therefore been defined to be the development of man as an individual and as a member of his society. The objectives of education for democratic living have been very effectively outlined by the Educational Policies Commission of the National Education Association of the U.S.A., which is responsible for the complete reorientation of Secondary Education in America today. Its report, "Education for All American Youth—A Further look" says :

"Schools should be dedicated to the proposition that every youth in the United States—regardless of sex, economic status, geographic location or race—should experience a broad and balanced education which will

(1) equip him to enter an occupation suited to his abilities and offering reasonable opportunity for personal growth and social usefulness ;

(2) prepare him to assume full responsibilities of American citizenship ;

(3) give him a fair chance to exercise his right to the pursuit of happiness ;

(4) stimulate intellectual curiosity, engender satisfaction in intellectual achievement and cultivate the ability to think rationally ;

(5) to help him to develop an appreciation of ethical values which should undergird all life in a democratic society."

The recommendations of the Mudaliar Commission also point to the same aims and objectives of secondary education. The report says that the aim of secondary education is "to train the youth of the country to be good citizens, who will be competent to play their part efficiently in the social reconstruction and economic development of the country," and "to prepare young men for the various vocations that are open to them."

It is true that these objectives of education can be attained only through an efficient curricular development at the elementary and secondary levels. The Norwood Committee goes straight into the vital importance of curricular development as a part of modern education when it remarks that "the curriculum must do justice to the needs of the pupils—physical, spiritual, intellectual, aesthetic, practical and social."

The Need for Curricular Development

Curricular development in order to meet the needs of the pupils is therefore the basis of imparting effective education. But it offers a number of problems in a vast underdeveloped country like India with its teeming millions of illiterates, dearth of properly equipped, properly qualified teaching personnel, paucity of funds at the disposal of the Central and State governments to give effect to the new orientation programme in education, lack of co-operation of the public and want of proper co-ordination of schemes formulated at the Centre and States. The most lamentable feature is the lack of initiative on the part of teachers to think seriously about the needs of pupils and the nation, and evaluate how far our education meets that need. This is due to the fact that in the past the centrally administered education was simply imposed on them, and they were never called upon to pilot any educational project or contribute independently to the development of a curriculum. Though education has not been decentralised, teachers are being increasingly invited to play their roles through workshops, seminars and discussions, to contribute their quota to the total development of education ; but unfortunately teachers have not fully overcome the inertia of the past and taken up their task seriously and in most cases we have a number of resolutions, often unworkable, but very little research work and field work through which the aims and ideals and objectives of education can be attained. Adverse economic condition of teachers also accounts for this dearth of constructive work in the field of education.

We are also constrained to remark that education has not received the full share of attention which it deserves from our national government, saddled as it is with major problems in so many spheres of the country's development. Time has come for our government not only to vitalize our teacher community, on whom devolves the full responsibility of making educational development fruitful, but also to inspire in teachers enthusiasm, confi-

dence and courage to come forward and explore in close co-operation with the Government how the curriculum of secondary education can be best developed for an all-round fulfilment of the main objectives of democratic education.

It is equally unfortunate that the teachers' organisations of this country which more or less reflect teachers' minds have not yet risen to the imperative demands of curricular researches, and done any tangible work in the field of development of curriculum. They have, however, made many useful recommendations for the improvement of the curriculum, but as regards the evaluation of the total curriculum, its impact on the pupils and how far it serves to meet the objectives of secondary education, practically very little has been done so far.

The curriculum for Basic education, formulated by educational experts under the direct leadership of Mahatma Gandhi, could not be fully implemented in many states. There are certain strong doubts raised on the utility of this curriculum but up to this time no serious effort has been made to locate and specify these doubts, review this curriculum, and help in its reconstitution, if necessary, in the light of the experience gained.

Curriculum in Secondary Education

It is in the field of secondary education that there should be the maximum research for curricular development—and there is sufficient scope for its richer and fuller development. As it is, it is still in a stage of experimentation and the Directorate of Extension Programmes for Secondary Education has been carrying on research for its maximum utilization through the Extension Services Departments of different training colleges. The present curriculum should be very carefully scrutinised to explore whether (a) it serves to meet the broad objectives of secondary education in its reoriented form, (b) it is suitable to the age of the pupils, (c) it can be adopted by the teachers on whom devolves the main responsibility of implementing it. The last factor is really vital; the teacher teaches alone in the class room and it is extremely doubtful whether he can maintain his daily vitality and impart lessons effectively unless he enters into the spirit of the curriculum and is fully convinced of its utility. All improvements in methodology and development of the subject will prove futile unless the teacher himself accepts them wholeheartedly. That is why we consider that the total involvement of the teacher in curricular development is essential, and teachers will react adversely the more it is imposed upon them In this connection we have also to take into full consideration the customs, if any, prevailing in a particular school community and the climate of public opinion in which the teacher works. The involvement of the community, consistent with the pattern of the local autonomy in the U.S.A. schools, will also we believe contribute substantially to the fulfilment of educational objectives. The vocational bias in

different school districts should be determined from its utility and practical value to the community. A standing committee for continuing curriculum research to meet the expanding needs and demands of this new "life education" system should immediately be started in different states with proper co-ordination with the Centre, and experiences of teachers of different subjects should be regularly evaluated and suitably adapted from time to time. The total load of syllabuses for the higher secondary examination should be judiciously examined. The ultimate objective of a four-language or three-language course should again be evaluated by experts. The question of a 12-year integrated higher secondary education in the place of the present 11-year course should again be opened with a free mind, and its findings scrutinised by experts and duly circulated to ascertain the climate of public opinion.

Teacher-involment in Curricular Development

Let me come back to the vital importance of the involvement of the teachers in the curricular development again. It is no doubt difficult to secure genuine conviction and wholehearted co-operation in a centralised system, mainly because teachers will readily agree to any suggestions or patterns from authority. But if this democratic education as a socialising agent is to crucial tests of time, not only the teachers but also the pupils, the parents and the community must be drawn together. In this process two major objectives should be kept in view, namely, educational needs in a democratic society and educational needs of a local community in which the school is situated, and a properly balanced and adjusted curricular development will depend on how far these two questions have been successfully tackled. As this will be a completely new approach in curricular development, we propose that at the initial stage guidance of experts should be made available to schools for the right line of approach and development of the proper attitudes and values, needed for such work. Again, this development of the curriculum or planning the school programme is closely inter-related to school budgets, personnel, qualification, pay and status of teachers accommodation and administration, and unless necessary changes are made in these branches—the curricular development project cannot work with success. In other words, curricular development is not an isolated factor but is intimately associated with the total improvement of the school. The failure of project so far formulated for curricular development is largely due to the fact that it did not cover the entire area of development of a school, as an indivisible unit of national growth and development.

The development of curriculum project will undoubtedly receive impetus if certain more advanced schools are selected as pilot schools in order to pilot the project and carry on experiments on it. These pilot schools will inspire faith and confidence in teachers in general to work indepen-

dently of Governmental control and supervision, invite other schools to share their experiences and publish their researches for the enlightenment of all teachers. The Teachers' Associations should also come forward for this pioneering work and they should be provided with adequate facilities and funds for experimentations by the Central and State governments.

Until recently, Secondary education happened to be the weakest link in the entire educational set-up of India. It is therefore in the fitness of things that beneficial measures are being adopted to improve and upgrade Secondary education, so that the majority of our students may receive through *it* a self-contained terminal education to meet the life situations, without the necessity of any college education. The recent decisions of the Government that Higher Secondary Final certificate will be deemed as sufficient for all Lower Grade Services also point to that end. It is now open to us, the teaching community, to explore the hitherto unexplored avenues of teaching, contribute vitally to the curricular development on the lines suggested, and share the responsibility of producing the right type of citizens to play their role in free India.

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DO YOU LIKE IT ?

Speaking of recruitment, Miss Allen made a plea for less grumbling from teachers. "Anyone not prepared to say, 'I like my job—it's the finest in the world,' should get out.

—*The School Master*,
October, 1959.

SUBJECT TEACHERS' ASSOCIATIONS

G.L. Chandavarkar

Teachers' organisations generally begin in a mood of anxious preoccupation with the problem of improving the teacher's economic and social status. But as they gain knowledge and grow to maturity, their interest undergoes a shift, and they perceive that professional competence is the surest foundation of professional status. This is where subject teachers' associations play a vital role. Shri Chandavarkar describes in this article how these associations bring subject teachers together in a fellowship which promotes mutual efficiency. —Editor

The International Secondary Education Project Team which travelled extensively in India and visited several Western countries in 1953-54 observed in its report that "except in a few rare cases, the main pre-occupation of the teachers' organisations (in India) was the economic status of the teacher. Matters of professional interest leading to improving the quality of education were seldom mentioned by the representatives of teachers' associations who met us." Teachers' organisations are not a new feature in the educational life of India. We have the All-India Educational Conference and the All-India Federation of Educational Associations. We have also State Federations of teachers and headmasters and local associations of teachers and headmasters in cities, towns and districts. It is true that, as stated by the International Team, these organisations have for a long time mainly confined their attention and energies to efforts for improving the economic and social status of teachers. There has been, however, an awakening during the last few years and teachers' associations have begun to realise that unless they play their part in the raising of the standard of teaching itself, the professional status of teachers cannot be high. We now have a growing sense of responsibility regarding the problems of efficiency of teachers and the raising of the level of the work done by them in their schools.

Need for Subject-mastery

When we think of the role which professional organisations of teachers can and must play in the raising of

educational standards and shaping of sound educational policies, we must have in mind a study and solution of problems connected not only with the general set-up of education in schools but also of those related to the teaching of particular subjects. A teacher's competence is judged not so much by his academic qualifications but by the mastery he acquires and maintains of the subject or subjects he teaches. This mastery is both in respect of the knowledge of the subject and the method he employs in teaching it. The acquisition of knowledge in any subject can never be said to be complete. A teacher, in order to be efficient in his work, must constantly go on adding to his knowledge. He should never cease in his efforts to improve his methods of teaching. For the acquisition of knowledge he must have books to read and for the improvement of his method he must have opportunities to exchange notes with other teachers and see their work. Facilities like these are made available in sufficient measure by organisations of subject teachers. While professional organisations can tackle problems such as examinations or home-work or backward pupils in a general way, subject teachers can study and find solution for problems relating to the content of a particular subject and to the method peculiar to that subject through subject teachers' organisations.

The B.E.T. Association

I think I can make this point more clear by taking a particular instance. In the first term of 1955, the newly established Department of Extension Services in the Secondary Training College in Bombay, conducted a refresher course for the teachers of English. As the course came to its close, the participants began to feel that there were certain common interests which bound them together as teachers of a common subject. They also felt that the fellowship that the refresher course had created could, if preserved and kept going, promote greater efficiency in the teaching of English. The idea was taken up by the Department of Extension Services and as a result of the encouragement and impetus provided by it, the Bombay English Teachers' Association was founded in December 1956. The general aim of this association is to promote and conduct such activities as would contribute to greater efficiency in the work of English teachers. For the fulfilment of this aim the B.E.T. Association organised the following activities during the last four years :—

(i) Lectures and talks on subjects such as the works of English poets and prose writers and the teaching of English poetry.

(ii) Programmes of recorded speech.

(iii) Discussions on topics such as English at the S.S.C. Examination.

(iv) Symposium on improved methods of teaching English.

(v) Courses such as the 'Teach Well' English course, 'Listen and Teach' course.

(vi) Discussion groups and demonstration lessons for a better understanding of the structural approach and the new syllabus in English.

(vii) Programmes of reading from English literature.

(viii) Programmes of recitations etc., given by school children.

(ix) Socials, at homes etc., to bring together teachers of English in different schools and to give them opportunities to know one another more intimately.

The 'Teach Well' English Course which the B.E.T. Association conducted during January-March 1958 consisted of (a) talks on Shakespeare, Elizabethan Songs and Sonnets, Milton, Eighteenth Century Prose and Poetry, the Romantic Poets, the Victorians and the Georgians, the English Novel, Background of American Literature and the English Bible given by professors of English from the different Colleges of Bombay, (b) talks on phonetics, on English words commonly mispronounced and on tenses in English, given by Mr. D. H. Spencer of the British Council, (c) discussions on topics in grammer such as anomalous Finites and tag questions led by Mrs. M. Choksi, Head of the English Department in the New Era School and (d) programmes of recorded readings from English authors. The Association arranged during 1958 a series of discussion meetings to consider the revised graded structures prepared by the All India Council for Secondary Education.

The B.E.T. Association has been active all these four years but there are certain important features which it has not been able to organise so far. One of them is the library service. It is not difficult to buy books but the handicap we suffer from is want of a suitable place where the books can be kept and where the members can go and read them if they do not want to take the books home. I have mentioned this feature because I feel that no subject teachers' organisation can feel satisfied with its achievements unless it has a good library service.

Fostering Interest

The subjects which many of the teachers in our schools have to teach are not necessarily those they like to teach or those in which they have acquired sufficient mastery before joining the profession. Subject teachers' associations can do a great deal in fostering in such teachers a liking for the subjects they have to teach and in giving them greater confidence in teaching those subjects. One very useful activity which such organisations can always undertake is the refresher course. In fact, this ought to be a regular feature of the programme of any subject teachers' association. It is not enough if a teacher knows how to teach his subject according the requirements of the syllabus or the common standards of teaching. It must be his constant endeavour to improve his own standard of teaching and, what is much more important, he must feel proud of his subject and of his efficiency to teach it. It is through membership of a subject teachers' association that he can achieve all this and more.

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MASS COPYING—A REMEDY

A. Edwin Harper, Jr.

We publish below extracts from a letter from Dr. A. Edwin Harper, Jr., Ph.D., of the Bureau of Educational Research, Ewing Christian College, Allahabad. The letter was induced by the deliberations of the Conference of Secretaries of Boards of Secondary Education held in September, 1959, which disclosed disquieting instances of ingenious mass copying at public examinations. Dr. Harper describes how the objective examination is a good corrective to this unhealthy tendency. We are sure our readers will find the suggestions interesting. —Editor.

There are several ways in which this "mass copying" can be reduced or even completely eliminated in objective examinations. As a matter of fact, I believe that properly constructed and conducted objective examinations are far less subject to this sort of "unfair means" than are the traditional types of tests.

I am assuming that there are a large number of objective questions in the examination paper, and a large number of candidates. I am also assuming that, as should be, enough time is allowed so that practically all the candidates can attempt all the questions. Under these circumstances, it is easy to make up a number of "forms" of the test by just scrambling the questions. Suppose you have half a dozen forms. In each of these, the questions appear in a different order from the order in each of the other forms. Then if these are distributed properly in the examination hall, no student would be sitting next to another student who has the same form of the test that he has. This makes copying extremely difficult, and practically impossible, even though the same questions appear in all the examinations.

An even more radical possibility is to have different questions in the different forms. This, of course, takes a good deal more preparation. It is also necessary that the different forms should cover approximately the same material, with approximately the same proportion of questions on each part of the course. Beyond this, it is only necessary to have a certain number of questions which are common to all of the forms. These can be as few as

ten to twenty per cent of the total number of questions, depending on the length of the test. These common questions which are answered by all of the candidates then provide the means for *determining* the difficulty, etc., of the different questions in each of the different forms. By means of statistical formulae, equal and equivalent marks can then be awarded on the basis of each of the different forms, just as though all of the students had actually answered the same examination. (See H. Gulliksen, *Theory of Mental Tests*, Wiley Chapman and Hall).

Another method which makes copying much more difficult is the use of a separate answer sheet, partly because it is much harder to locate the correct answer that another student has written when it is on a separate answer sheet. Incidentally, the IBM answer sheet, which is used in the U.S.A., should *not* be used here. This is because IBM *test scoring* machine cannot be used in Indian climate. However, we have developed types of answer sheets which are adapted to Indian conditions. These have been in use for several years, and we find that Indian students have no *difficulties* with them.

It may be that the motivation of those who helped students is that they felt the tests were "unfair" as they were a "new thing". (How we fear new things!) A solution of this problem which has been found successful in India is the provision of an "Information Sheet" to each student, some time prior to the examination. This Information Sheet gives a brief description of the test, a note on how to prepare for and how to answer objective-type examination questions, and two or three samples of each type of question to be included in the examination. This prior information tends to reduce the anxiety of the students considerably. It also arouses their interest, and the interest of their parents and friends, in this "new kind of examination". Finally, it greatly *reduces the time* necessary in the examination hall to explain how to answer the questions.

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ERRATUM

We regret that the title of the artical entitled 'Making Objective Examinations' published in the November—December 1959 issue of *Teacher Education* was printed incorrectly. It should have been 'Marking Objective Examinations'. We apologise to Dr. Harper and to our readers for this mistake.

—Editor

INTRODUCING BOOKS ON EVALUATION

In the October 1959 issue of Teacher Education, we published a preliminary bibliography of essential reference books on evaluation and curriculum, and promised to bring out in subsequent issues brief digests of some of those books. In this issue, we give the first of the series. The book chosen is "Measurement and Evaluation in the Secondary School" by H.A. Greene, A. N. Jorgansan and J. R. Garberict. The digest has been prepared by Shri P.D. Sharma, one of our Evaluation Officers. —Editor

"Measurement and Evaluation in the Secondary School"
by H.A. Greede, A.N. Jorgansan and J.R. Garberict
Longmans Green & Co., Revised edition 1954.

This book has been written specially for the use of secondary school teachers and students of secondary education. It gives a very valuable and readable account of the essential principles, tools and techniques of measurement and evaluation. Examinations, so far, have suffered from the fundamental defect of taking only academic achievement, and even that not comprehensively enough. within their purview. This gives a very limited view of the student's total educational gains and attainments as resulting from school instruction. Also, the teacher does not feel motivated to think explicitly of other possible gains to the student through the education he receives. Measurement and evaluation on the other hand, take all the aspects of growth of a pupil's personality into account and thus help to give a comprehensive picture of the situation. As a result, the teacher is better able to modify his method and class room work, and to adapt instruction to suit every individual's needs. This is the view that has been maintained by the authors throughout the work. They have also laid great stress on the practical problems of improving all types of teacher-made examinations and tests, and have accordingly, treated at length the construction, improvement, use and interpretation of all evaluative and measuring devices.

The book aims at stimulating the teacher and the supervisor of the secondary school to make more effective use of tests and other evalua-

tive devices as integral parts of enlightened teaching practice. It, therefore, deserves to be read with interest by all teachers. Special effort has been made to keep the presentation simple, straightforward and effective. A brief chapter-wise analysis of the contents of the book now follows :

Chapter 1. Introduces the reader to the concept of evaluation and appraisal as an outlook different from that of testing or measuring. The child is considered as a whole rather than as a bundle of behaviours and abilities which can be catalogued into a number of compartments. The need for use of such other means as the anecdotal record, the interview, the questionnaire, the rating scale and also such tools as the class record, the cumulative record, the individual and the case study have been pointed out.

Chapter 2. Provides a brief historical background to the development of educational and mental tests. The highly significant developments in the field of measurement and evaluation during the last 20 years have been briefly discussed.

Chapter 3. Presents a classification of the tests and other tools used in educational and mental measurement. Tests have been classified broadly by their function into educational, intelligence and personality tests ; educational tests have as their primary function the measurement of the results of instruction and learning.

Chapter 4. Discusses at length the essential qualities of a good measuring instrument or technique. Five such characteristics, namely, validity, reliability, practicability, comparability, and utility have been discussed, of which validity is stressed as the most important.

Chapters 5-11. Present the methods of constructing the major types of tests and evaluative techniques and their values and uses to the teacher—standardized tests in chapter 5, teacher-made essay and important objective tests in chapters 6 and 7, performance tests in chapter 8, evaluative techniques in chapter 9, intelligence and aptitude tests in chapter 10 and personality interests and techniques in chapter 11.

While dealing with standardized tests, their usefulness for pupil gradation and placement, group comparison, measuring efficiency of learning, diagnosis and remedial work has clearly been brought out. Advantages and disadvantages of the oral and essay type have been discussed and suggestions for the improvement of essay examinations and the objectivity of their scoring have been given. In the construction of informal objective tests, outcomes such as skills, knowledge, concepts, understandings and applications have been considered and the need of relating the test items to such purposes brought out. The uses and limitations of the basic types of objective items namely, simple recall, completion, alternative response, multiple choice and matching tests have been discussed and suggestions for the construction of each type listed separately. Among the methods of personality measurement, observation of behaviour and personal reports have been considered

most useful and practical in the normal class room.

Chapters 12-14 : Provide the necessary statistical background for the summarization and interpretation of test results and for determining relationships among the results of measurement. Techiques for translation of test scores, finding measures of typical performace, and spread of scores, and the correlation co-efficient as a measure of relationship between two sets of scores, have been developed. Also, the basic precedures and devices by which results can be intrepreted in a readily understandable manner, namely, graphical representation, test norms and derived course, are explained, as also the uses of correlation in interpreting reliability and validity of a measuring instrument.

Chapters 15-24. Devote themselves to the development and use of tests in the various subject fields namely, languages, arts, social studies, mathematics, sciences, fine arts, industrial and practical arts, business education and health and physical education. In each subject area, the educational and social significance of the subject, major objectives and outcomes, tools of measurement and evaluation together with illustrative examples of the types of questions to be used for each area, have been provided. Practical methods of using test results for analysing and diagnosing the learning difficulties of pupils and the organisation of preventive and remedial instruction in important school subjects are also suggested.

Chapter 25 : The last chapter deals with the problem of measurement of general achievement and introduces the reader to a number of survey tests of general achievements in use in the U.S.A. for that purpose.

The book makes a sizeable volume of over six hundred pages dealing with all aspects of the child's growth and all school subjects, and will serve as a useful reference for the teacher in the different areas of his special interest.

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"LIVE" NOTEBOOKS

Notebooks can be alive or dead, according to the usé to which they are put. A general hotchpotch of exercises, compositions, notes, dictations corrections and so forth is of little use to the child—he cannot find his way about in it after several pages have been filled and he is interested only in current piece of work. The rest is often consigned to the lumberroom of his mind and conveniently forgotten. For a notebook to be alive, it needs not merely to be witten in, but to be frequently consulted.

To achieve this, written work needs to be divided into two kinds : composition (and any exercise done) and notebook work. Composition is best done on looseleaf paper and kept in a folder or file. This facilitates collection and carrying away for marking and also makes it possible for suitable work to form part of a book by the child, of the class magazine, wall newspaper, or open-day exhibition or to be filed for typing for the school magazine. After a while, unrequired ephemeral work can be destroyed to avoid cluttering desks and cupboards : the best may be cherished by the child either being stored in his folder or taken home to show his parents.

Consecutive Numbering

This segregation enables the notebook to be developed into an individual reference book. A fairly substantial one is required, the "sides" being numbered consecutively throughout. The first page or two should be reserved for a table of contents, preferably (though not necessarily) in alphabetical order. Experience will indicate how many pages to allow for each "subject" ; after the first year the teacher ought to have compiled a model notebook of his own.....

The sections listed might well read like this : Abbreviations, Acting, Capital letters, Care of Books, Foreign expressions, Grammar, Letter-writing, Literature, Models, Poetry, Proverbs, Punctuation, Reading, Reference books, Reports, Speech, Spelling hints, Theatre, Vocabulary. A 96-page notebook will probably accommodate two years' streams. A later notebook could includesections headed Debating, Films, Magazines, Newspapers, Radio, Television. The last three or four pages should be reserved for the index, which must be compiled in alphabetical order and is best thought out in advance by the teacher, since it should give page references for anything that

has to be looked up frequently, such as details of grammar (adjective, adverb, etc.) ; details of punctuation (colon, comma etc.) ; names of reference books ; terms like consonant, vowel, syllable, rhyme, metre, stanza, etc. The index may be compiled when the notebook is fairly full, or spaces may be left to allow for later insertions in alphabetical order.....

The contents of the notebook would grow as occasion demanded.....

A Section of Models

The section entitled "Models" is intended for pieces of writing, preferably constructed by the composite composition method, to act as guide for various forms of sentence structures and internal connections, punctuation and paragraphing ; simple descriptions of things, processes and emotions ; instructions ; and character sketches.

The "Reading" section could comprise two distinct things : a reading list for the year, suggested by the teacher or drawn from textbooks containing introductory extracts ; and a reading record compiled by the pupil, showing title and author of each book read, dates of starting and finishing...

"Reports" would begin with instructions on how to report various possible occurrences : the breaking of a window, a street accident or fire (involving directions on telephoning), a loss or theft (involving a detailed description of the article(s) lost and possibly of someone acting in a manner arousing suspicion) and so forth. Later it would continue with the conversion of direct speech into reported speech and would outline how to "write up" a school occasion, such as a speech day, open day, dramatic production, or sports event.

Under "Spelling Hints" such rules as there are (and their exceptions) would gradually be accumulated ; but it would also include little hints such as "If you look at the printed word *paralleled*, notice that the parallel bars come in the middle" and "Even Grandma knows Grammar has no E in it."....

—JOHN GARRITY
in *The School Master*,
October 30, 1959.

* * *

A REDEFINITION OF EDUCATION

When we look realistically at today's world and become aware of what the actual problems of learning are, our conception of education changes radically. Although the educational system remains basically unchanged, we are no longer dealing primarily with the *vertical* transmission of the tried and true by the old, mature, and experienced teacher to the young, immature, and inexperienced pupil in the classroom.

This was the system of education developed in a stable, slowly changing culture. By itself, vertical transmission of knowledge no longer adequately serves the purposes of education in a world of rapid change.

What is needed and what we are already moving toward is the inclusion

of another whole dimension of learning: the *lateral* transmission to every sentient member of society, of what has just been discovered, invented, created, manufactured or marketed......

Is our present historic idea of education suitable for people in the mid-twentieth country, who have a life expectancy of 70 years, and who live in a world of automation and global communication, ready to begin space exploration and aware of the possibility of bringing about the suicide of the entire human species?

Is it not possible that the problem of the educational system's obsolescence goes beyond such issues as methods of teaching reading or physics or the most desirable age for leaving school, or the payment of teachers or the length of summer holidays, or the number of years best devoted to college?

Is not the break between past and present and so the whole problem of outdating in our educational system—related to a change in the rate of change? For change has become so rapid that adjustment cannot be left to the next generation. Adults must—not once, but continually—take in, adjust to, use, and make innovations in a steady system of discovery and new conditions.

Is it not possible that an educational system that was designed to teach what was known to little children and to a selected few young men may not fit a world in which the most important factors in everyone's life are those things that are not yet, but soon will be, known?....

In today's world, no one can "complete an education". The students we need are not just children who are learning to read and write, plus older students, conceived of as minors, who are either "going on" with or "going back" to specialised education. Rather, we need children *and* adolescents *and* young *and* mature *and* "senior" adults, each of whom is learning at the appropriate pace and with all the special advantages of experience peculiar to his own age.

Each and every one of these is a learner, not only of the old and tried—the alphabet or multiplication tables or Latin declensions or French irregular verbs or the binomial theorem—but of new, hardly tried theories and methods: pattern analysis, general system theory, space latices, cybernetics, and so on.

Learning of this kind must go on, not only at special times and in special places, but all through production and consumption from the technician who must handle a new machine to the factory supervisor who must introduce its use, the union representative who must interpret it to the men, the foreman who must keep the men working, the salesman who must service a new device or find markets for it, the housewife who must understand how to care for a new material, the mother who must answer the questions of a four-year-old child....

This, then, is what we call the *lateral transmission* of knowledge. It is not an outpouring of knowledge from the "wise old teacher" into the

minds of young pupils, as in vertical transmission. Rather, it is a sharing of knowledge by the informed with the uninformed, whatever their ages. The primary prerequisite for the learner is the desire to know......

To facilitate this lateral transmission of knowledge, we need to redefine what we mean by primary and secondary education....

Instead of adding more and more years of compulsory education (which would further confuse the meaning of education and the purpose of schools), we need to separate primary and secondary education in an entirely new way :

By *primary education* we would mean the stage of education in which all children are taught what they need to know in order to be fully human in the world in which they are growing up —including the basic skills of reading and writing and a basic knowledge of numbers, money, geography, transportation and communication, the law, and the nations of the world.

By *secondary education* we would mean an education that is based on primary education, and that can be obtained *in any amount* and *at any period* during the individual's whole lifetime....

But, more important, men and women, instead of preparing for a single career to which—for lack of any alternative—they must stick during their entire active lives, would realize that they might learn something else. Women, after their children became older, could be educated for particular new tasks, instead of facing the rejection that today is related to fear about the difficulty of acquiring new learning in middle age.

Whatever their age, those obtaining a secondary education at any level (high school, college, or beyond) would be in school because they *wanted* to learn and *wanted* to be there *at that time*....

The right to obtain secondary education when and where the individual would use it would include not only the right of access to existing conventional types of schools but also the right of access to types of work training not yet or only now being developed—new kinds of apprenticeship and also new kinds of work teams.

In thinking about an effective educational system, we should recognize that the adolescent's need and right to work is as great as (perhaps greater than) his immediate need and right to study. And we must recognize that the adults need and right to study more is as great as (perhaps greater than) his need and right to hold the same job until he is 65.

We cannot accomplish the essential educational task merely by keeping children and young adults—whom we treat like children—in school longer. We can do it by creating an educational system in which all individuals will be assured of the secondary and higher education they want and can use any time throughout their entire lives.

—MARGARET MEAD
in *NEA Journal,*
October, 1959.

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Editorial

One of the modern trends in education is to develop school curricula in terms of the aptitudes, interests and needs of the pupils and the community. The curriculum for girls in our secondary schools needs to be considered from this angle. The National Committee on Women's Education which submitted its report last year rightly pointed out that in developing a well-balanced curriculum for girls it would be wrong to proceed on the assumption that girls' aptitudes and interests are confined to the four walls of the home or that society's need for the services of women is only as housewives and home-makers. As regards girls' aptitudes and interests, teachers and psychologists, the former speaking mainly from experience and the latter on the basis of research and experimentation, have proved convincingly that girls' aptitudes as well as interests extend far beyond the home and the domestic arts. As regards the country's needs for the services of women, a study made by a group in the Planning Commission has revealed that woman power on an extensive scale is required in various fields of national development, the chief among which are education at different levels, health services, social welfare, work and village and small scale industries. On the basis of this study which was undertaken at the suggestion of the Chairman of the National Committee on Women's Education, the Committee has suggested that there is good scope for imparting training in these fields to women.

Some of this training can be given in separate courses after a girl has completed the required stage of general education, but there is scope as well as need for introducing pre-vocational education in certain fields, at the secondary education stage in girls' secondary schools. Such pre-vocational education or education with a vocational bias has been introduced in many secondary schools, in the form of diversified courses on the recommendation of the Secondary Education Commission. Courses such as those in technology, commerce and agriculture introduced in the multipurpose schools for boys are, by and large, pre-vocational and are expected to provide a preparatory training to the boy if he proposes to take up an occupation in the corresponding vocational field. The course in home science which is the most popular diversified course in multipurpose schools for girls, on the other hand, appears to be framed chiefly to suit the girls' role as home-makers. Similarly, courses in fine arts which recommended themselves to girls' schools, on a smaller scale, are framed to suit girls, artistic aptitudes. The only vocation for which these courses

may be considered to be a preparation is that of a teacher, a teacher of home science or a teacher of fine arts. *With* this exception, courses in home science and fine arts, as framed at present, do not seem to have any employment potential for girls going in for them.

In this issue of *Teacher Education,* devoted to a consideration of the curricula for girls at the secondary education stage, our contributors have examined thoroughly the kind of courses needed in commerce and home science from the point of view of the triple role that an educated woman is required to play namely, that of a citizen, a home-maker and a professional worker who will have her legitimate place in the developing national economy of the country. Some of the contributors have laid special stress on the last role as being something which needs to be emphasised and spelled out in detail. They have spoken from their wide experience in the particular field they represent and with insight into what education must provide in the preparation of the women professional workers that the country needs.

The National Committee for Women's Education has recommended that some additional diversified courses of a pre-vocational nature, suitable for *girls, need to be introduced in girls'* multipurpose schools. They have suggested the following :

(i) Secretarial courses to include pre-vocational training in correspondence, filing, typing etc ;

(ii) Courses useful for secretaries of organisations and office assistants, which should include training in taking notes, *writing minutes of meetings,* giving press reports, maintaining accounts, correspondence, etc ;

(iii) Courses leading to social welfare work of various types ;

(iv) Courses in crafts and cottage industries ; and

(v) Courses in education leading to jobs of pre-primary or primary teachers or social education workers after further training.

This recommendation of the Committee merits the special attention of educationists. There is an obvious need for a larger number of diversified courses in our multipurpose schools and for further diversification in each of the courses, from the point of view of the woman power requirements of the country.

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The Composite Reporter

These are days when a number of educational institutions all over the country, are celebrating their Annual Social Gatherings under one name or another. One of our Extension Centres did well to choose as the topic for a week-end seminar "How to organise school social gatherings". As organised at present, these leave a great deal to be desired in many cases. Quite a lot of meaningless routine seems to have entered into these celebrations. No Gathering takes place without a Chief Guest or a President, yet his or her speech is the greatest source of worry to the organisers. If the speech is to be at the end of the day's programme, half the audience melts away as soon as it is realised that the stage is being set for the formal function. If it is put at the beginning, and this is notified in the programme in advance, people choose to come late in order to give the slip to an item on the programme which they consider to be dull and boring. If it is in the middle of a good entertainment programme, the audience gets restive at the unwelcome interruption in the fun they were having and nobody is in a mood to listen to the speech. Yet no school or college wants to celebrate its annual gathering without having somebody to preside over it or to act as Chief Guest and the irony of fate is that the audience itself would be the loudest in its protests if this item was left out !

If prizes are to be distributed, the parents of the prize winners wait in order to enjoy the thrill of the young hopeful receiving a prize, amidst cheers and acclamation, at the hands of the Chief Guest. The young aspirant, however, is anxious to get a prize and does not care who hands it out to him. Very often in his impatience, he snatches it from the hands of the teacher whose function is to pass over the prizes to the Chief Guest for distribution. As Chief Guest, it has been our experience that the habit of shaking hands while distributing prizes is neither so graceful nor so safe as joining hands 'Namaste' fashion. It is no joke shaking hands with about 200 prize winners, some of whom insist on a hearty, 'hail fellow well met' handshake. Young girls nervous at their first entrance on the stage present clammy hands which are really not fit for being shaken. Why shake hands when one can say 'Namaste' with hands joined ?

The entertainment programme at the Gathering is sometimes left entirely to the children with very little guidance from the teachers. On one

occasion when the programme dragged on into the small hours of the morning and the Chief Guest was exasperated, the Headmaster explained, "Well, you see, the pupils insist on getting up, their own items and in these days one cannot afford to dishearten one's pupils". In the programme of the day on this occasion there were a number of boring dialogues between some King or Prince and his faithful nobles or an enemy who had surrendered. Fiery speeches in a set style with mechanical artificial gestures were the fare of the day. Girls from the school gave occasional items of dances which had neither finish nor spontaneity or sentimental songs sung dolefully. If unguided pupil activities are allowed to dominate the programme of the social gathering in this manner, what a golden opportunity is lost for a good training in dramatics, dancing and the presentation of a really attractive and appealing programme. There should either be perfect spontaneity, in which case the paraphernalia of the stage and the curtains are out of place or there should be items got up with care.

Self-evaluation is resorted to with many of our school activities. It will certainly be a worthwhile experience evaluating our social gatherings from the point of view of parents, the audience, the teachers, the pupils and last but not the least the Chief Guest of the function. The evaluation may include the performance of each of these parties also.

* * *

What touching faith youngsters have in the power and potency of their parents ! The younger the child the greater is the faith. For a child of three there is nothing that his father or mother cannot do or does not know. It was at a college gathering the other day that we witnessed a concrete proof of this touching faith. One of the audience was a boy of three, the only son of a college lecturer. This little chap, very attractive in appearance, had made his way to the first row of chairs reserved for the Chief Guest and other important guests, the father sitting modestly somewhere in the background. Comfortably seated in a chair, the little boy showed no embarrassment at being in the midst of the august company of VIPs and watched the variety entertainment show with avid interest. At one point, the stage arrangements took rather long and the curtain did not rise for a long time. Half-scared and half-impatient at the continued darkness in front and unable to bear the suspense any longer, the little boy started bawling out "Daddy, the curtain won't go up ! Why don't you do something ?" The poor father who had absolutely nothing to do with the stage arrangements sank in his shoes, feeling small and ashamed of himself as everybody tried to spot who the daddy was. He tried to hide his identity by remaining unmoved and making no response to the child. Just then the curtain did go up and the boy cried out cheerfully, "Thank you, daddy, I am happy that you have lifted the curtain".

A little girl of our acquaintance on her first voyage across the seas kept on crying petulantly, "Mother, why must

you do it ? Why must you shake me so ?" And when the poor mother replied that the shaking was due to the rolling of the ship on a rough sea, the daughter peremptorily ordered the mother to stop the rolling of the ship.

This faith in the parent's power gradually begins to dwindle as the years pass and the child's horizon widens but it continues well into adolescence. A young lad of twelve of our acquaintance always keeps a string of questions ready for his mother to answer on a Sunday afternoon. The mother who is a well-informed Science Professor can meet the young boy's battery of questions to his satisfaction. Pleased with one of her answers to what he considered to be a really knotty question, he asked, "Mother, can you answer all the questions that are put to you" ? The mother answered, "This is the one question that I can answer, son, and the answer is firmly and definitely in the negative". And the boy replied in all admiration, "Mother this is good enough for the Composite Reporter of "*Teacher Education*".

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The following incident, we have on authority, happened in an area where compulsion in primary education was being introduced and social workers were trying to induce parents to send their children to school. An old man received the social worker and the primary teacher who had accompanied her, cordially and said "Behenji, my daughter cannot be spared to go to school. She has plenty of work to do at home, cooking and looking after the baby. But I am an old man, too feeble to turn my hand to anything useful. If it is heads you count in your school, please take me instead of my daughter. I will attend school everyday and you will get the number of heads you want in the school. That will be the contribution of my family to the Government's scheme". This sporting offer was a very practical proposition according to the parent, but neither the social worker nor the primary teacher was willing to accept it.

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EXTENSION SERVICES NEWSLETTER

NORTH-WESTERN ZONE

The Extension Services Department, Jullundur, arranged an advanced level evaluation workshop in English which was attended by 7 teachers. The Department also called a conference of heads of selected schools of Jullundur to discuss arrangements for experimenting with objective type tests during February next. Fifty-five heads of higher secondary schools attended a seminar on internal assessment organised at the training college, and discussed problems of internal assessment and problems arising out of the introduction of the higher secondary system. Another important activity during the month was the survey and evaluation of the work of 7 science clubs functioning in local schools. With help from the Department, the annual science fair was held in a local girls higher secondary school, in which science teachers from other schools also participated.

Nine teachers attended a four-day workshop on evaluation in general science organised by *the Department of Extension Services, Chandigarh*, and prepared a number of test items. The Department also arranged a four-day workshop on evaluation in mathematics for the B. Ed. students of the training college, when the teacher-trainees were acquainted with the technique of evaluation. Another workshop on evaluation in Hindi for 9 Hindi teachers, and school visits were the other activities of the month.

The activities of *the Extension Services Department, Patiala*, were mainly confined to visits to schools in connection with assessment of science clubs and discussion on special problems.

The Extension Services Department, Ferozepur, organised a workshop for 15 teachers on Action Research. Dr. Stephen M. Corey, T. C. M. Officer, and Dr. Udai Pareek of the National Institute of Basic Education, acted as consultants. The technique of Action Research was discussed in detail and the participants were helped to formulate their own research plans. The Department also organised a three-day course on the teaching of Hindi, when demonstration lessons were also arranged. School visits helped to discuss follow-up programmes arising out of previous workshops and seminars.

The Department of Extension Services, Udaipur, continued the evaluation workshop begun at Govardhan multipurpose higher secondary school, Nathdwara, during November, 1959. The participants discussed the objectives of teaching different subjects, gave thought to devising suitable learning situations and prepared test items. The Department also organised a six-day state-

evel workshop in general mathematics for 15 selected teachers of the State. In July last, the Department had arranged a seminar on promotion of international understanding and coperation. Six of the participants of that seminar were invited to a two-day follow-up conference when they exchanged information on the work done by them in their schools and discussed the difficulties experienced by them. It was planned to write short pamphlets on the subject for students of the age-group 14 to 17.

The Extension Services Department, Bikaner, conducted a workshop on evaluation in social studies for 18 persons. At a two-week training course in library organisation which was attended by 85 participants, a working knowledge of the various aspects of library organisation was given to the participants. Meetings of teachers' clubs in languages, social studies, science and mathematics discussed their problems in an informal manner.

The Co-ordinator of *the Extension Services Department, Jamia Millia, New Delhi,* visited ten schools during the month, accompanied by members of the staff of the training college, when demonstration lessons were given in the use of various teaching aids. Improvement of class-room teaching and organisation of home work were the subjects of discussion. A symposium on "How to beautify rural schools", organised by the Department at the campus of a middle school in a rural area, drew various suggestions to make the school environment attractive. The Department also organised two conferences of teachers of senior basic schools in the rural area, and a nine-day course on the teaching of English in class VI. The latter laid particular stress on the structural approach. A seminar of heads of secondary schools discussed the causes of the general fall in the standards of teaching.

Two seminars were held under the auspices of *the Department of Extension Services, Central Institute of Education, Delhi,* on the teaching of commerce and maintenance of cumulative records. The Department also organised three workshops on evaluation, the school beautiful and challenging assignments. Principals of schools met to discuss among other subjects, creative activities in schools, experimental projects and science clubs. The Research Study Circle heard a talk by Dr. S.M. Corey, Educational Consultant from Columbia University on Action Research. At a meeting of the teachers' study circle, Mrs. H. J. Moos, from the Ministry of Education, spoke on the use of audio-visual methods in India's development programmes. The Co-ordinator of the Department visited 31 schools during the month, mainly in connection with the teaching of English and follow-up of the work seminar on school-health practice.

NORTHERN ZONE

Two evaluation workshops were held under the auspices of *the Department of Extension Services, Government Constructive Training College, Lucknow,*

one in advanced Hindi, and another in geography. School visits in Barabanki and Hardoi districts helped to deal with problems of teaching various subjects. Shri R. K. Kapur, Deputy Educational Adviser, Government of India, accompanied by Dr. E.R. Towers T.C.M. Consultant, visited the Department.

The Extension Services Department, Allahabad, organised an evaluation workshop in History. Study circles were held in Hindi, science, economics and commerce. School visits served to give demonstration lessons, and administer new type tests. The library and audio-visual services were maintained as usual.

An advanced state-level evaluation workshop in general science was the main feature of the month's activites at *the Extension Services Department, Aligarh.* The Department began the evaluation of science clubs established in its jurisdiction.

The Department of Extension Services, Agra, arranged an advanced-level evalution workshop in mathematics. Evaluation techniques were also discussed at a meeting of the teacher-trainees of A. K. College, Shikohabad, At another meeting of 65 teachers of the local institutions at Shikohabad. the Co-ordinator accompanied by a member of the staff of the training college, visited three science clubs.

The Extension Services Department, Isabella Thoburn College, Lucknow, organised two workshops in Hindi and home science during the month. A Kavi-sammelan, in which teacher-poets recited their poems, was an interesting feature of the Hindi workshop. School visits followed up the suggestions made during an earlier course in English conducted by the British Council. It was observed that several of the participants of the course had been trying out the new ideas they had gained from the course. Several schools were visited in connection with evaluation of science clubs.

A workshop organised by *the Extension Services Department, Meerut,* provided training to teachers in the use and operation of audio-visual aids of different kinds. An exhibition of audio-visual aids, photographic material, magazines, books and charts, prepared by the participants, was arranged on the last day of the workshop.

The Director and the Co-ordinator of *the Department of Extension Services, Jabalpur,* visited a number of schools and discussed various topics with teachers. Problems of guidance were discussed at a meeting of the headmasters' forum. A meeting of the science study circle held useful discussions on the planned development of school science education. The Department assisted at the all-India Science Teachers' Conference and the all-India Educational Conference held at Jabalpur. 10 film shows were organised by the Department during the month.

The Co-ordinater of *the Extension Services Department, Benaras Hindu University,* visited 9 schools during the month to explain to the heads and teachers of schools the various activities of the Extension Services Department and discuss experimental projects.

Sixty-two teachers from the high schools of Bihar sub-division attended a symposium on evaluation and assessment organised by *the Department of Extension Services, Patna*, at the Nalanda Collegiate School, Bihar Shariff. The Department also organised a three-day workshop for teachers of eight high schools, when the participants discussed the syllabi in various subjects and prepared suitable learning experiences on certain teaching units. Another three-day workshop for science teachers was attended by fourteen teachers. The Co-ordinator gave three talks on 'New trends in examination with special reference to history' to the participants of a seminar on World History. School visits were undertaken to evaluate the science clubs in the area.

The Department of Extension Services, Cuttack, organised an eight-day refresher course in general science for 38 school teachers. Besides general discussion of syllabus and teaching-methods, the programme included several science experiments and 4 demonstration lessons. Science clubs were assessed during school visits. At the annual exhibition organised by the central science club, three member science clubs participated. Two film shows were held during the month.

The Co-ordinator of *the Extension Services Department, Gauhati,* visited four schools and discussed with the members of the staff topics of current interest. A demonstration lesson on the teaching of geography followed by discussion, was arranged at the Don Bosco High School. The Department also organised a lecture on 'New trends in education'.

An orientation workshop in social studies organised by *the Extension Services Department, Turki,* was attended by 34 teachers of high and higher secondary schools. The Co-ordinator visited schools to evaluate the work of science clubs, and to speak to the teachers on 'New evaluation techniques' and 'Evaluation and Examination'. Under the guidance of the Department, a few schools took up a project to make their surroundings attractive.

At a five-day seminar on the teaching of Hindi in secondary schools held by *the Extension Services Department, Bhagalpur,* 31 teachers participated and discussed the defects in the teaching of the language. A number of projects aimed at removing these deficiencies were prepared during the seminar. The Department also organized an exhibition of books, charts and magazines at the Senior Training School, Hansdiha, on the occasion of the Basic Teachers' Conference of the State. Ten schools availed themselves of the library services of the Department. Eight film shows and four school visits were other activities of the month.

The Department of Extension Services, David Hare Training College, Calcutta, completed the part-time course in geography started earlier. A geography teachers' study circle was the outcome of this course. The

Department also conducted a week-end seminar on history, and a short-term course in psychology. The latter course which was attended by 37 teachers, consisted of lectures, discussions and intensive laboratory work. A meeting of the central science club was held to finalise the programme of activities to be undertaken by its members. A meeting also took place of the Advisory Council of the Department to draw a plan of work for the next term. The Co-ordinator visited a number of schools to assess the work of science clubs.

The Department of Extension Services, Institute of Education for Women, Alipore, organised two follow-up workshops of teachers who had attended training courses held by the Department. The participants discussed various practical problems arising out of their experiences in connection with maintenance of records in schools. Two meetings of the general committee of the Bengal Womens' Education League held preliminary discussions for the ensuing Annual Conference of the League. Weekly visits gave guidance to two schools which are carrying out experimental projects. The Co-ordinator of the Department also participated in the seminar on English literature held by the British Council during the period under review.

A three-day course on the structural approach to the teaching of English organized by *the Exension Services Department, Hoogly,* was attended by 33 teachers from 5 schools. A continuation seminar on general school problems at which 29 teachers were present, focussed attention on the problems of teaching pupils from backward homes and the improvement of the social position and status of the teachers. A meeting of the heads of selected schools helped to draw a programme of activities for the Department during the next quarter.

The Department of Extension Services, Shantiniketan, held a one-day seminar on the teaching of social studies, when stress was placed on the integrated approach to the teaching of the subject. The study circle at Nagari, discussed the problem of examination failures. Indiscriminate admission, lack of co-ordination between teaching procedures and examination objectives, poor performance in English and inability of teachers to adjust instruction to the wide individual differences among pupils, seemed to be the major contributory causes to the malady. The Co-ordinator visited a number of schools mainly in connection with experimental projects and organisation of science clubs. The Department also assisted the Bolpur Boys School in organising a comprehensive educational exhibition.

CENTRAL ZONE

The Extension Services Department, Kurnool, helped to conduct two evaluation workshops in science and general mathematics. Eight science clubs were visited during the month.

A state-level evaluation workshop

in elective mathematics organised by *the Department of Extension Services, Hyderabad*, was attended by twelve teachers. At another ten-day composite evaluation workshop in mathematics, science, history, geography and English, 36 teachers from secondary schools of Hyderabad and adjoining districts participated. The Co-ordinator gave a talk on the latest developments in Examination Reform to the Madak District Teachers' Annual Conference. School visits were related to follow-up programmes flowing out of the English course organized earlier by the Department. The work of thirteen science clubs was assessed during the month, with the assistance of the members of the training college staff.

The Co-ordinator of *the Extension Services Department, Rajahmundry*, visited 4 schools to discuss with the staff their special problems and difficulties, and to observe the working of the science clubs. A general observation that children of 10 years of age were nervous while taking the written test for admission into form I, appeared to call for an objective examination. The Extension Services Department has decided to make a special study of the problem. The Department published its first library service bulletin containing short reviews of two books.

The Department of Extension Services, Secondary Training College, Bombay, organized a eleven-day seminar for 30 teachers of English, Mr. D.H. Spencer of the British Council serving as chief consultant at the seminar. An advanced state-level evaluation workshop in social studies was attended by 11 teachers from all over the state. The Department loaned 300 books to six schools and gave special teaching aids to several other schools.

The Co-ordinator of *the Department of Extension Services, Baroda*, conducted a week-end conference of teachers of a local school, where a programme of assessing pupils' achievements through written, oral and practical examinations was carefully chalked out. A programme of conducting the third periodical test for the experimental class of Shri Sayaji High School for Girls was drawn up at a meeting of the teachers of the school. The Advisory Committee of the Department which met to devise ways and means of enriching the in-service training programme of the Department, endorsed the plan of attaching teachers of rural areas to model schools, and decided to explore the possibility of organizing educational tours for secondary school teachers. Besides maintaining its usual library and audio-visual services, the Department organized an educational exhibition at Cambay.

The Co-ordinator of *the Extension Services Department, Ahmedabad*, visited six schools during the month to help schools in their projects, to guide the activities of science clubs and to discuss other problems of special interest. The Department also organized a refresher course-cum-workshop for teachers of Hindi. The Evaluation Officer started an active programme for evaluation work in 7 schools. The programme consisted of selection of teaching units, formulation of specific objectives and plan-

ning testing according to objectives.

At a three-day evaluation course for selected teachers of local schools arranged by *the Extension Services Department, Kolhapur*, the participants were made familiar with the procedure for trying out printed test items in their schools. The teachers who attended another evaluation workshop in general mathemetics prepared over one thousand test items. The Evaluation Officer also addressed the trainees of the training college on evaluation techniques. The Co-ordinator of the Department visited 6 schools to assess the work of science clubs. 8 film shows were held and 12 other films were loaned to the local and mofussil schools in the district.

The Department of Extension Services, Poona, arranged a three-day workshop of history teachers of Poona District. Another workshop helped to train teachers in administering the test material in general science and mathematics. A third workshop for physical education teachers of Ahmednagar District, and two state-level workshop in general science and English were also organised by the centre. During his school visits, the Co-ordinator discussed their problems with the staff and gave demonstration lessons.

A state-level workshop for evaluation in general science was held by *the Department of Extension Services, Nagpur*, when the participants constructed as many as 200 test items. A subject teachers' seminar on the teaching of mathematics discussed the objectives of teaching the subject, teaching methods and learning experiences. Lectures, discussions and film shows were also arranged for the benefit of the participants. The Co-ordinator participated in a radio-symposium on the principles, techniques and aids in today's education in the school-broadcast programme.

SOUTHERN ZONE

Two important features of the activities of *the Department of Extension Services, Trichur,* were the holding of week-end refresher courses in mathematics, science and social studies and an evaluation workshop in English. The Co-ordinator of the Department visited 33 high schools during the month discussed health programmes, school examination and evaluation and gave guidance regarding school libraries and science clubs.

A six-day seminar on physical education was held under the auspices of *the Department of Extension Services, St. Christopher's Training College, Vepery, Madras.* The aim of the seminar was to acquaint physical education teachers with the latest trends in the subject. During the seminar, the participants visited Y.M.C.A. College of Physical Education where they witnessed demonstrations on indigenous activities, counter-marching and rhythmic activities. The Extension Centre also organised an evaluation workshop on mathematics. The course on blackboard work was completed during the

month. The last two classes of the course dealt with the teaching of geography, history and science. Shri R.K. Kapur, Deputy Educational Adviser, Ministry of Education, visited the Centre.

The Department of Extension Services, Annamalai University, continued the weekly course in English Language started earlier. The Co-ordinator visited eight local schools and acquainted the members of the staff with the services rendered by the Extension Department.

The Co-ordinator of *the Department of Extension Services, Madurai,* visited 13 schools in connection with the evaluation of the activites of science clubs. A batch of 4 teachers and 50 teacher-trainees visited the Department and acquainted themselves with the various types of teaching aids. Eleven schools availed themselves of the library services of the Department. The Department also organized a 4-day workshop on the teaching of general science, when the participants received training in the preparation of teaching aids for lessons in Biology.

A seven-day workshop on evaluation in general mathematics was held by *the Department of Extension Services, Mysore.* The Department also organised two symposia in connection with the Education Week which was celebrated in Mysore. The first symposium dealt with the problems of discipline in high schools and the second with problems of higher secondary schools. Audio-visual services to 12 schools and an educational exhibition in connection with the education week, were the other activities at the centre.

Two evaluation workshops were held under the auspices of *the Department o Extension Services, Belgaum.* The Co-ordinator visited seven schools in connection with the assessment of science clubs. He spoke on library services in schools and evaluation programmes at meetings of headmasters and teachers, and also attended a seminar on the teaching of English as a foreign language, directed by Dr. Ghosh of the Central Institute of English, Hyderabad.

The Department of Extension Services, Mangalore, arranged a four-day workshop for Kannada teachers. Another workshop for drawing teachers was held during the same period. Fifty-four teachers participated in the two workshops. Another activity of the Department during the month was the exhibition of teaching aids, projects, lesson plans and improvised apparatus prepared by the pupil-teachers of the training college.

The Director and Co-ordinator of *the Department of Extension Services, Trivandrum,* visited several schools during the month to discuss different problems and give guidance to the members of the staff. Two evaluation workshops were conducted with the help of the Department, one for the teachers of English and the other for those of science. The Department organized film shows on the occasion of the workshops.

The Co-ordinator of *the Extension Services Department, Calicut,* visited two schools during the month to organize activities of science clubs. The Depart-

ment also organised film shows and loaned teaching aids to schools. The library services of the Department were maintained as usual.

EXTENSION HIGHLIGHTS

School Library Services

The Department of Extension Services, Aligarh, arranged a seminar on School Libraries in collaboration with the Muslim University Library, Aligarh. The seminar was attended by 54 librarians of various higher secondary schools of Aligarh and adjoining districts. The Department was able to secure the services of Dr. S. R. Ranganathan for this seminar. Several useful suggestions were adopted for improving library services in schools. A Central Association of Librarians was also formed on the occasion.

Hindi Question - Papers

The Extension Services Department, Bombay, organised a seminar for teachers of Hindi. Under the guidance of Prof. Ramanujam Sinha, the participants discussed various aspects of question papers in Hindi set at the S. S. C. Examination during the last five years. A report of the seminar was forwarded to the S. S. C. Examination Board.

Science Day

With the assistance of *the Extension Services Department, Bombay,* a Science Day was observed on the 1st of December, 1959. About 60 teachers attended the function where the participants spoke about the work done by scientists in India and abroad.

Teachers' Visits

The Department of Extension Services, Baroda, invited the second batch of six teachers from rural areas to observe various activities at the University Experimental School. Among other topics, the technique of maintaining cumulative records and the organization of educational projects, science clubs and school museums were discussed. The teachers also attended a course in the technique of preparing sociograms. These visits by teachers have been extremely useful to them.

PUBLICATIONS

The following publications were brought out by the Extension Services Departments during December 1959:

1. Government Training College, Jullundur.
   - (1) Newsletter from June to September, 1959
   - (2) Our Equipment. (This contains detailed and classified lists of books and other T.C.M. equipment).

2. Jamia Milia Islamia, New Delhi.	(1) American Republic (Urdu & Hindi). (2) How to improve Basic Schools (Urdu & Hindi).
3. Central Institute of Education, Delhi.	(1) Newsletter No. 32, September, 1959. (2) Progress in Teaching English. (A Report of the Course held at Dalhousie in May and June, 1959).
4. Department of Education, Muslim University, Aligarh.	(1) A Report of the Advanced Level Evaluation Workshop in General Science. (2) A Report of the Seminar on School Libraries.
5. Patna Training College, Patna.	(1) Three Sets of Illustrative materials of Evaluation Tests. (2) Newsletter.
6. Radhanath Training College, Cuttack.	(1) A Report of the Refresher Course in Social Studies.
7. David Hare Training College, Calcutta.	(1) Part-time Course in Mathematics—A Report.
8. Government Training College, Shantiniketan.	(1) Library Bulletin No. VIII.
9. Vinaya-Bhavana, Visva-Bharti, Shantiniketan.	(1) Newsletter No. 6. (2) Improving Examinations.
10. College of Education, Osmania University.	(1) Newsletters of the 2nd and 3rd quarters.
11. A.G. Teachers' College, Ahmedabad.	(1) Mentor. (2) A Report of the Workshop in Hindi teaching.

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HOW TO RUN AWAY FROM AN EDUCATIONAL PROBLEM

Paul B. Diederich

We reporduce below an interesting article by Dr. Paul B. Diederich of the Educational Testing Service, Princeton, N. J., U. S. A. It is a frank expose of the dialectical tactics through which the educator often dodges a problem. Why a problem is not our problem can be supported by a hundred reasons, but the right thing to do is to go straight for the problem and tackle it. —Editor

Most educational discussions become, sooner or later, a desperate attempt to escape from the problem. This is often done clumsily, causing unnecessary embarrassment and leaving the group without the comfortable feeling of having disposed of the problem. A "cultural lag" is evident in this situation. Educational leaders have long since worked out an adequate battery of techniques for dodging the issue.

In the course of a misspent youth the writer and his friends have sat at the feet of many eminent practitioners of this art and have compiled a list of their devices. The list, of course, is only tentative, partial, incomplete, a mere beginning, etc., but it should at least give group leaders a command of alternative modes of retreat, enabling them to withdraw their forces gracefully and to leave the problem baffled and helpless. In the interest of promoting the Christian spirit, we must dispense with acknowledging the sources of the following items. Additions to the list will be gratefully received.

1. Find a scape-goat and ride him. Teachers can always blame administrators, administrators can blame teachers, both can blame parents, and everyone can blame the social order.

2. Profess not to have *the* answer. This lets you out of having *any* answer.

3. Say that we must not move too rapidly. This avoids the necessity of getting started.

4. For every proposal set up an opposite and conclude that the "middle ground" (no motion whatever) represents the wisest course of action.

5. Point out that an attempt to reach a conclusion is only a futile "quest for certainty." Doubt and indecision "promote growth."

6. When in a tight place, say something which the group cannot understand.

7. Look slightly embarrassed when the problem is brought up. Hint that it is in bad taste, or too elementary for mature consideration, or that any discussion of it is likely to be misinterpreted by outsiders.

8. Say that the problem "cannot be separated" from other problems; therefore no problem can be solved until all other problems have been solved.

9. Carry the problem into other fields; show that it exists everywhere, hence is of no concern.

10. Point out that those who see the problem do so by virtue of personality traits: e.g., they are unhappy and transfer their dissatisfaction to the area under discussion.

11. Ask what is meant by the question. When it is clarified, there will be no time left for the answer.

12. Discover that there are all sorts of "dangers" in any specific formulation of conclusions: dangers of exceeding authority or seeming to, of asserting more than is definitely known, of misinterpretation, misuse by uninformed teachers, criticism (and of course the danger of revealing that no one has a sound conclusion to offer).

13. Look for some remote philosophical basis for settling the problem, then a basis for that, then a basis for that, and so on back into Noah's Ark.

14. Retreat from the problem into endless discussion of various techniques for approaching it.

15. Put off recommendations until every related problem has been definitely settled by scientific research.

16. Retreat into general objectives on which everyone can agree but which suggest no content and no changes in the present programme.

17. Find a face-saving verbal formula (like "in a Pickwickian sense") which means nothing but which everyone will accept because he can read into it his own interpretation. This is the highest art of the good administrator.

18. Rationalize the *status quo* with minor improvements.

19. Retreat into analogies and discuss them until everyone has forgotten the original problem.

20. The reverse of "begging the question." Begin with a problem like "what should be the content of our core course?" End with the conclusion that may be we ought to have a core course.

21. Explain and clarify over and over again what you have already said.

22. As soon as any proposal is made, say that you have been doing it in your school for ten years, even though what you have been doing bears only the faintest resemblance to the proposal.

23. Appoint a committee to weigh the pros and cons (these must *always* be weighed) and to reach tentative decisions that can subsequently be used as bases for further discussions of an exploratory nature preliminary to arriving at initial conclusions on which methods of approach to the pros and cons may be predicated.

24. Wait until some expert can be consulted.

25. Say "That is not on the agenda; we'll take it up later." This may be extended *ad infinitum.*

26. Notice that the time is up. If other members of the group look surprised, list your engagements for the next two days.

27. Conclude that you have all clarified your thinking on the problem, even though no definite conclusions have been reached.

28. Point out that *some of the greatest minds have struggled with this problem;* implying that it does us credit to have even thought of it.

29. Say forcefully, "Do we really want this laid-out cold for us?" Obviously we don't. Therefore, wet-nurse the problem.

30. Be thankful for the problem. It has stimulated our best thinking and has therefore contributed to our growth. *It should get a medal.*

Certainly with all these techniques, there is no excuse for awkwardness in problem-evasion.

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GIRLS IN COMMERCIAL EDUCATION IN SECONDARY SCHOOLS

Inez Ray Wells

Girls in careers are comparatively a minority in our country and they generally choose either the teaching or the medical profession . They are not drawn to secretarial and commercial posts, except perhaps a few in big urban centres. The commercial courses in multipurpose schools are not generally chosen by them. What possibilities are open in this field to our women, what special qualities are required, and how career-courses should be adopted to their special needs, are explained in this article. The author, Dr. (Miss) Inez Ray Wells, is a member of the Ohio State University Team of Consultants attached to the Directorate and a specialist in commercial education. —Editor

One of the best-conducted commercial classes that the writer has had the opportunity to visit in India was in a girls' school where alert young ladies and an enthusiastic teacher had carried the work far beyond the minimum requirements of the state. These girls had developed skill in shorthand and typewriting adequate for use in an office. With a good background in the language used and in the general commercial subjects, they were prepared to accept positions or to go on for higher education.

Although women in business positions in India are not numerous, enough are employed so that the door is ajar and others may enter. Women in sales positions probably outnumber those in offices at the present time, but women have proved their competence and adaptability in both phases of the work.

With a few exceptions, commercial programmes at the secondary level are new, having been given impetus by the multipurpose school movement, which was put into effect during 1955, a scant five years ago. During that time the number of multipurpose schools has increased to about 1,500, of which only 284 offer the commercial stream. Only a few girls' schools are among this number, for the contribution that girls can make to business enterprises has not been fully realized.

Although the requirements vary somewhat from state to state, the basic

course in each is element of commerce (sometimes called business practice), which gives an understanding of what business is and does and includes information regarding the procedures followed in a business office and in distributive activities, including salesmanship. Commercial geography, including civics and economics, is required in some states. In others, economics is studied, either as a special subject for commercial students or as a part of the core requirement. Book-keeping and stenography (typewriting and shorthand) are offered. In some states the student has a choice between the two; in others, both are required. A few states require book-keeping students to study typing but not shorthand.

Like course requirements, the objectives vary from state to state. In most of the schools visited, the teachers said that their students are prepared to take jobs upon completion of the higher secondary commercial course. This objective of the teachers—competency at the end of the secondary course—is in harmony with the recommendations of the Secondary Education Commission

> "......that greater emphasis should be placed on crafts and productive work in *all* schools and, in addition, diversification of courses should be introduced at the secondary stage so that a large number of students may take up agricultural, technical, commercial or other practical courses which will train their varied aptitudes and enable them either to take up vocational pursuits at the end of the secondary course or to join technical institutions for further training."

Attention is called to the phrase "to take up vocational pursuits at the end of the secondary course." In some areas of education, it is not possible to prepare students for vocational pursuits by the end of the secondary course, but the experience of other countries, as well as that of some schools in India, shows that the time is adequate for the accomplishment of the vocational objective in commercial education. A generally accepted point of view in the U.S.A. is that

> Unless the schools, particularly the high school classes nine through twelve give thorough consideration to the occupational objective, they will fail in one of their prime missions—that of providing students with the means of earning a livelihood. Without this ability, knowledge of the services of business will have little utility.[2]

Although the Commission use the masculine pronoun in speaking of students when discussing vocational education, it also says, "Every type of education open to men should be open to women."[3]

The availability of jobs in business for secondary school graduates varies from place to place, but more opportunities will undoubtedly be available as

[1]*Report of the Secondary Education Commission* (October 1952-June 1953). Ministry of Education, Government of India, p. 27.

[2]H.A. Tonne, *Principles of Business Education*, Second Edition, New York: Gregg Publishing Division, Mc Graw-Hill Book Company, Inc., 1954, p. 14.

[3]*Report of the Secondary Education Commission*, p. 53.

industrial development continues at a rapid pace, since the increased size of industrial organizations inevitably leads to more demands by management for the records needed for planning and control and more demands for distributive workers.

The development of India in respect to women's employment by business may well parallel that of the U.S.A., perhaps at an accelerated rate. Women were first employed in offices in the U.S.A. about 1890, when the typewriter was first developed as a practical office machine. Over the seventy intervening years, the proportion of women to men has increased gradually until now about 95 per cent of all stenographers and secretaries and more than half of the general clerical workers and book-keepers are women. Men still predominate in accounting positions, but the proportion of women is increasing as more of them major in accounting at the collegiate level.

After they had become accustomed to female employees, American men discovered that they liked women as secretaries. Women suited to office employment enjoy the detailed work and are conscientious in their attention to duties. Although some rise to administrative positions, many are content to put their efforts into relieving their employers of the necessity for thinking about routine work and into turning out rapidly and accurately the work required by the employer.

The National Secretaries Association, International (an organization started in the U.S.A. which has spread to other countries), has promoted the organization of the Institute for Certifying Secretaries, which prepares and administers high-level examinations to experienced secretaries. The breadth of a secretary's work is indicated by the six sections of the examination ; human relations, business organization and management (including economics), business law, accounting, secretarial skills (shorthand, typing, and transcription), and communication skills. Of those who have passed the CPS examination, over half have had no formal education beyond the secondary school.

No such examination has been developed for distributive workers, but this, too, is a field of endeavour in which women may rise to high-level and responsible positions. It is a field. moreover, that needs to be given more attention by schools in both America and India.

Benefits for Women in India

In this comparatively new field for women in India, what are the benefits that may be gained by them if they select the commercial stream in the secondary school ?

1. For those who cannot or do not wish to go on for higher eductation, the commercial stream offers opportunity to prepare for employment in a field that is now open to them and in which the opportunities should increase steadily.

2. Those who wish to continue their education at the college level are prepared to do so. The secondary course provides a good background for the B. Com. degree and also provides stenographic skills that are not at the

present time available at the college level. For women, the stenographic skills often prove to be the entering wedge to various types of work in business.

3. College-bound students may find it possible to use their skills in part-time or vacation employment to help them finance their college education. This is a common practice in the U.S.A., even among students whose parents can afford to finance their higher-education.

4. As the number of multipurpose schools with the commercial stream increases, there will be an increased demand for commercial teachers, for which women are admiraby suited. Women are also employed by colleges of commerce, and this number should increase.

5 The understandings and skills gained through the commercial stream are valuable to a woman who manages a home.

6. There is no prejudice against married women holding positions in the schools or in business. Many women at present combine careers with marriage.

Qualifications Needed

At the present time there are no completely adequate prognostic tests to determine an indivdual's suitability for commercial study or for success in business positions. However, experience has shown that the following are necessary :

1. *At least average intelligence.* Those who are to rise to secretarial positions or other positions of similar responsibility must have above-average intelligence. Routine jobs requiring only average intelligence are available, but they hold little opportunity for advancement.

2. *Liking for detailed work.* Much of the work in an office requires close attention to detail. This is true of the work of the book-keeper, the general clerk, the stenographer, and the secretary.

3. *Ability to take responsibility.* The employer must be able to accept the work presented without the necessity for checking it. He must also know that the work will be done correctly and promptly, so that no "bottlenecks" will develop, since the ability of one worker to carry on his work is frequently dependent upon the promptness and accuracy with which other workers complete their tasks.

4. *Ability to exercise initiative.* The competent business worker must acquire sufficient judgment to allow him to know when to proceed with work without instructions. Certain routine tasks should be delegated permanently to specified workers; it is when an unusual task arises that initiative is needed.

5. *The ability and desire to work with other people.* Both distributive and office personnel must have or develop the ability to work harmoniously and cooperatively with others, taking leadership at times and acting as followers at others. Certain individuals will be in contact with the public, and their attitudes will help or hinder the businesses which employ them.

6. *Proficiency in language.* A

stenographer or secretary must have the ability to transcribe correctly, even to the point of making minor editorial changes. The competent secretary is usually required to compose letters and reports, and they must be correct and effective. In the schools in which students are given a choice between shorthand and typewriting in English and the regional language, it is essential that those choosing English be well versed in that language. Proficiency in speaking and writing, whether in the mother tongue or English, is an asset to the distributive worker also.

Investigations Needed

In order to enable individual schools to determine the policy they should follow in offering commercial courses to girls, certain investigations should be carried out. There should be a survey of the community to determine :

1. the extent of employment of women in business and Government,
2. the kinds of business and government offices in which women are now employed,
3. the positions opened to secondary graduates and their opportunities for advancement,
4. the work actually done and the business machines used,
5. the qualities and qualifications desired by management, and
6. the possibility of employment of an increased proportion of women.

In the light of the findings of such an investigation, the schools should make an analysis of the adequacy of the present offerings in the secondary school. They should find out :

1. whether or not the curriculum meets the needs expressed by employers,
2. whether the standards held by the school are high enough, and
3. whether present courses should be modified or supplemented by new ones.

Follow-up studies of students each year will provide information useful in making a continuous evaluation of the adequacy of the programme.

Conclusion

There is at present a place for women in business in India. In view of the industrial development of the country, the demand for both office and distributive workers will increase. If women are well educated for business positions and if they desire to work, there seems no doubt that they can find employment suited to their capabilities.

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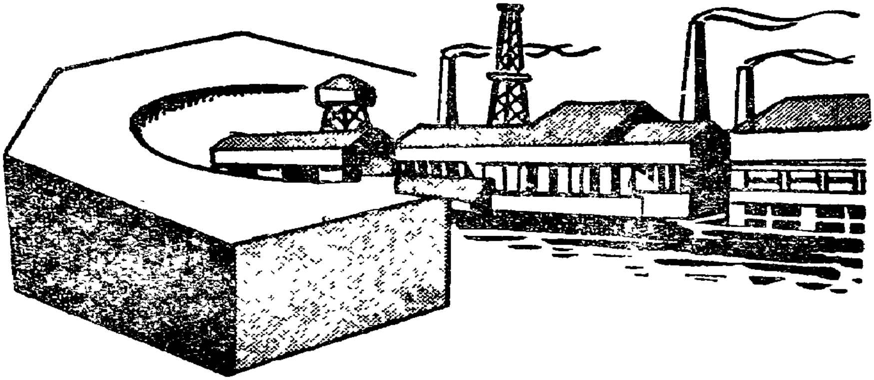
More Industries



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HOME SCIENCE IN THE HIGHER SECONDARY SCHOOL

Rajammal P. Devadas

Dr. Rajammal P. Devadas, Joint Director, Directorate of Extension, Ministry of Food and Agriculture, Government of India, is a specialist in Home Science Education, and our readers have already had the benefit of her practical suggestions on the teaching of the subject in the secondary school. In this article she deals with the career opportunities pertaining to the subject. Her discussion is all the more appropriate now when we are trying to link up courses in the multipurpose school with further employment.
—Editor

Scope of Home Science

Home Science covers all the interests and aspects of one's personal development, family and community life. The study of home science is based on the applications in daily life of the basic sciences, the humanities, and the fine arts. It thus caters to the physical, emotional, psychological and spiritual needs of the members of the family and community.

The aim of home science is the improvement of living-conditions in the home and the community. Home living includes worthy home membership, family relationships, health, clothing and housing for the family, food, nutrition and home management and child development. In the higher secondary schools, home science education prepares young girls for their future roles in life, the functions and responsibilities of citizenship, family membership, home making, parenthood and other careers. It helps them in the development of a sound philosophy, home living, and a sense of values and appreciations. It enables pupils to understand how to manage their resources, and influences them in making the right selections and decisions.

Areas of Home Science

The major areas of home science as prescribed in the Draft Syllabus for secondary schools presented by the former All India Council for Secondary Education, and which has been adopted with slight or no modifications by almost all the States, are foods, nutrition and cookery, household management, textile, clothing and laundry, health, first-aid and home nursing, child development and mother-

craft, and human relationships. It is obvious that a knowledge of these different aspects helps the pupils in their personal development and in the selection of their future careers.

Functions of Home Science in the Secondary School

Home science in secondary schools helps pupils in their daily life to

(1) appreciate values such as the sacredness of the home, the importance of a happy family life for balanced development, consideration for others, shouldering responsibilities, and expressing art in daily life ;

(2) create proper attitudes such as helpfulness in the home and community, eagerness to work amicably with others, and respect for the privileges and rights of others ;

(3) gain knowledge of good health, child care, nutrition, clothing, housing and how these factors affect family life;

(4) acquire skill in household tasks like preparing food, entertaining, selecting and making garments and care of clothing: and

(5) form sound habits of personal hygiene, harmonious living with others, correct habits of eating and working efficiently.

Through imparting these values, home science education helps pupils in solving their present problems, laying a foundation for happy homes in the future, and in preparing them for careers.

Home Science and Careers

In addition to preparing women for the greatest of all careers, 'home making', home science prepares them also for several careers among which may be mentioned teaching, extension, social service, dietetics, nursery school management, housekeeping, catering, etc.

In Extension Service

Community Development programmes and Welfare Extension Projects need thousands of trained women workers to take care of home improvement and developmental activities among women. Therefore, girls passing out of the high school with home science as a special subject can enrol themselves as gramsevikas, mukhya sevikas, health visitors, craft instructors, sewing instructors etc. The Central Government, State Governments, and voluntary agencies like the Central Social Welfare Board and the Kasturba Gandhi National Memorial run Trust training centres such as Home Science Wings, Kasturbagram Centres, gramsevikas' training centres, industrial schools and schools of nursing where selected students are awarded stipends during the training period, and are posted in the Community Development Blocks or Welfare Projects after completion of training. Girls who have studied home science in the high school are preferred to these positions, since the core of women's programmes in the villages is the improvement of home living conditions-diet, health, child care, hygiene, home-management etc.

The Directorate of Extension of the

Ministry of Food and Agriculture have established 40 Home Science Wings in the various States, attached to Agricultural Extension Training Centres, to train the gramsevikas. The minimum educational qualification for gramsevikas is matriculation. They should be above 18 years of age, should come from a village back-ground, in good health and interested to work and live in the villages. The selected candidates are given a stipend of fifty rupees a month on the condition that they give at least three years of service to the State after completing their training. In the Home Science Wings they undergo a one-year training programme in Home Science Extension. The trained gramsevikas are posted in Community Developement Blocks at the rate of two gramsevikas per Block. The Block which is the unit of Community Development work, consists of 100 villages with a population of approximately 66,000. It is expected that the whole country will be covered by nearly 5,000 blocks by the end of 1961. Therefore 10,000 gramsevikas will be required by the end of that period. Gradually, a net-work of 50,000 gramsevikes are expected to be working in the villages. Therefore, this programme has thrown open a wide career to girls who wish to dedicate themselves to social work.

A similar programme is under operation under the auspices of the Central Social Welfare Board where training is given to gramsevikas under identical conditions in the Kasturbagram Training Centres.

The Community Development Blocks also need 5,000 mukhya sevikas at the rate of one mukhya sevika per block. The mukhya sevikas are expected to supervise and guide the gramsevikas. This is also another big career for girls trained in home science. Besides, the Community Development programme needs trained health visitors, nurses, and other women workers.

In teaching

Given additional teachers' training, girls studying home science in multipurpose schools will be admirably fitted for teaching in nursery, elementary, middle and basic schools. Because of the practical nature of home science and its wide scope they will be able to bring realism in their teaching.

Among other careers which are available for home science students may be mentioned food service departments (hostels, restaurants and catering places), commercial companies dealing with food, household equipment, clothing and toys, school feeding programmes, cooperative stores, newspapers, radio broadcasting, social work, and matrons and wardens.

Outcomes of Studying Home Science

The rewards of studying home science are the happiness and satisfaction derived in being able to run homes efficiently and smoothly with love and devotion. This is a big contribution to the community. One of the chief outcomes of home science education is a balanced personality who is healthy, affectionate, pious, sound in thinking and making decisions, resourceful, tactful and thoughtful. She will give to

spiritual values a high place in her home and make meditation and worship important in her family. Being equipped very well for the art of home maing, she will be an asset to her family. By careful use of labour, money, and time through material and human resources, her attitudes, ideals and appreciations will be directed towards abundant living.

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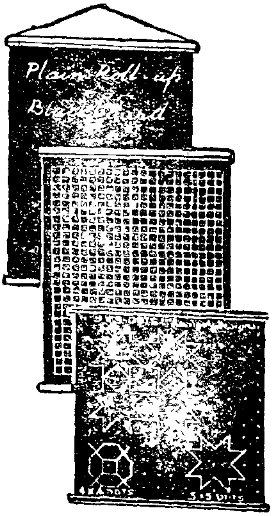

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PLACE OF HOME SCIENCE IN SECONDARY EDUCATION FOR GIRLS

Durga Deulkar

Secondary education for girls has the dual role of shaping them as home-makers and wage-earners. The home science curriculum should be adapted to serve this dual role. Dr. (Miss) Durga Deulkar, who is a lecturer in Home Science in Lady Irwin College, New Delhi, gives many useful suggestions for a dynamic approach to the organisation and evaluation of the subject.

—Editor

Home science is defined as the science and art for home and family living. The study of home science is threefold; it must include techniques and scientific methods in the management of the home, the right approaches to individual, family and community relationships, and the development of personal, family and social values. No doubt, in this technological age, the physical aspects of the study such as cooking, sewing, making family budgets and nutrition should form an important part. Nevertheless, it is very essential that provision be made in the curriculum of home science to develop the art of cooperative living in the family and community. Human values which we cherish within the family circle and within the community and the relationships between the family and the community are vitally important for a satisfying and happy family life. For the fulfilment of these objectives, the curriculum of home science studies at the secondary level must deal with the technique, the knowledge values, and the art of gracious living in family and commnity.

Aims of Secondary Education

Secondary school is the terminal point in education for many Indian girls. As indicated in the report of the National Committee on Women's Education, only a small number of girls reach the college or university stage. After school, most girls enter matrimonial life, and only a few persue some vocational education in order to equip themselves for gainful employment. However, the changing economic structure of the present day society makes it incumbent on every adult member, married or otherwise, to work and contribute towards the economic resources of the family. A woman therefore, may play a dual role—that of a

home-maker and that of a wage-earner. A young girl, completing her schooling, is confronted with the problem of fitting herself into this structure. It is, therefore, obvious that secondary education for girls should be designed primarily to prepare our young women for this dual role. The report of the Secondary Education Commission lays emphasis on promotion of creative ability and stimulation of thought and self-expression in order to develop character, personality and self-reliance in the students completing school.

The aims of secondary education as stated in the report are

1. the development of personality,
2. the close relationship between school and community,
3. the training in discipline and leadership, and
4. the development of democratic citizenship.

Home science, with its dynamic approach in the application of the theory of better family living into practice, has potentialities to meet the above mentioned aims envisaged by the Commission. It also prepares the student to take up her responsibilities of a home-maker, and a member of her family and community.

Some Needs of Our Society

A large section of our society suffers from ill health, malnutrition, and economic pressures. Th se are interrelated, one resulting out of the other. Ill health is closely associated with dirt and dirt with proverty. But poverty is not the sole cause of ill health or unhygienic living which is very often due to the lack of a sense of cleanliness. This indicates that there is an urgent need for developing values and habits of cleanliness in the young in schools and through them send the message to their homes. Malnutrition does not result only from deficiency of food, it might and very often does result from lack of knowledge of what we should eat in order that we may derive the the maximum benefit from it. Education in nutrition needs a special emphasis in the home science curriculum of secondary education. Economic pressures which give rise to numerous problems and difficulties in family living can be minimised if people are educated in the proper use of their resources. Guidance and knowledge in the intelligent use of family and community resources is a 'must' in the education of our girls.

Meaning of Home Science in Secondary Education

Home-making is more than a job or a profession. It is a way of living. It calls for education in experiences that *transcend vocational training.* It calls for an understanding of human nature; an insight into human behaviour, and an appreciation for people's needs and aspirations for better living. Home science studies at the secondary school level should not be only a set of theories and principles which pupils learn in the classes and work out in laboratories. It should be developed out of the interest of the pupils in their personal and family well-being. It should be built upon the immediate needs of the pupils and the needs of their fami-

lies. It should deal with the every-day living of people: the food they eat, the clothes they wear and the homes in which they live. It should deal with the relationships in the family, family health and care of the children. Home science teachers should be concerned with belief of the people, the things they respect and value in their life and the plans they have for their economic and social betterment. The girls at the secondary leval are at an age, when they are vitally interested in their physical and emotional development and social relationship, and are eager for knowledge and guidance in the art of home-making. This subject therefore, will have an appeal to them and the teacher should draw upon this natural motivation to bring about desirable changes in their own individual living and that of their family.

Education in home science lends itself to developing desirable qualities of democratic citizenship. Regard for the social customs amidst which we live, respect for the rights and property of others, awareness of duties and responsibilities and a high sense of discipline, are some of these qualities. Home science with its emphasis on habits of cleanliness, orderliness and precision, practice in group work, training in organization and planning, and develop ment of appreciation of people's ways of living, would contribute towards building of qualities for good citizenship.

Underlying Principles

The fundamental principles of home science education at the secondary level are :

(a) The development of knowledge and skills in making decisions, economic use of human and material resources, planning and organization of work, working in groups, and habits of accuracy and precision.

(b) The development of values and attitudes in relation to individual health, cleanliness and sanitation, beauty and aesthetics, service to the community, working in cooperation with others, and creative thinking and creative work.

For implementing these principles, opportunities and experiences should be provided for the students to do independent thinking and planning, solve problems, exercise judgement and work in groups. It is therefore, very important that education in home science be functional. The experience provided in teaching situations should be as similar to those in the pupil's homes as possible. Teaching methods of preparation of food or modes of laundering clothes, or stitching garments will not alone be adequate to meet the goals of home science. For example, basic knowledge about foods and nutrition is essential for good health. However, if the pupils are not able to relate it to the food problems of their families or form good nutrition habits, the aim is not fulfilled. Therefore, a teaching unit on this topic must include the following objectives:

A. To develop

1. understanding and appreciation of food habits of different families,
2. understanding of foods, their

nutritive values and cost,

3. skills in selection, planning, preparing and serving of a meal, and
4. attitudes towards good nutrition.

B. To promote habits of

1. good nutrition, sanitation and hygiene, and
2. the economic use of materials, time and energy.

This is just one illustration of a functional application of a part of home science education which may be extended to other aspects and parts.

Examinations

The system of examination as it has developed during the years is based on the assumption that the knowledge gained in teaching is a body of subject matter of established facts and theories and also on the assumption that this can be tested satisfactorily by the degree of recall in students. Home science does not fully lend itself to this type of evaluation and less so to an external examination. The achievements of students in the subject may, however, be best measured in terms of the change in behaviour of the pupils in addition to the information and knowledge that they gain. Therefore, evaluation in this subject could be much more effective if examinations especially in the practicals are conducted by those who have observed the students for a length of time. Education in home science in high schools is concerned with personal and family living. A dynamic approach must be used in the organization, teaching and evaluation of this education.

Importance of Home Science

Home science has thus an important place in the curriculum of secondary education. Girls in high schools are our future home-makers even though some may persue other careers as well. Home science education prepares them in the art of home-making and for better family living. A well planned home science programme would also contribute in building their personalities and character, and prepare them to meet the challenges of life. In secondary schools therefore, home science should form an integral part of education of our girls who are the potential leaders of our community.

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SPECIAL CURRICULUM FOR GIRLS IN SECONDARY EDUCATION

Kalyani Karlekar

In the following article Mrs. Kalyani Karlekar traces the hard conditions through which Indian women "gate-crashed" into a haphazard system of education. Declaring that women are equally intellectual with men, she proceeds to consider how home science is "par excellence the subject for girls", and puts out concrete suggestions for a good home science curriculum. Mrs. Karlekar is the Co-ordinator of the Extension Services Department, Institute of Education for Women, Alipore, Calcutta.

—Editor

Girls' education in modern India has been largely determined by the exigencies of its history. Whatever might have been the glories of womanhood in ancient India, no vestige of it had remained when, in the days of the British East India Company, Mr. William Adam wrote in his reports (1835-38) that Indian women lived in the absolute and hopeless darkness of ignorance. It was considered inauspicious for women to be educated and when some rich parents did give some instruction to their daughters to enable them to protect their 'stridhan,' they carefully concealed the fact from others in fear of social opprobrium.

During the days of what has been described as the Nineteenth Century Renaissance in India, women gate-crashed into the system of education which was evolving haphazardly for days. The first woman who passed the Entrance Examination of the Calcutta University had to wait a long time for permission to take college education, and the first woman doctor of Bengal managed to enter the Medical College only through a loophole in its constitution. She was, however, not awarded a degree and had to obtain one from the United Kingdom.

But as days passed, the accomplished fact of women's entry into the field of modern education was ultimately accepted and they gained the rights of equal competition and equal honours with men. Somewhat later the thoughts of educational planners and administrators turned towards the need for providing some scope for the special requirements and aptitudes of women.

The Secondary Education Bill presented to the Legislative Assembly in the quinquennium of 1935-39 included plans for separate types of education for Hindus and Muslims and girls and boys most of which had to be given up owing to the great deal of controversy they created.

Domestic science and arithmetic was introduced optionally in place of compulsory mathematics and, in place of the compulsory classical second language, the option of "classical" Bengali was allowed to girls. These provisions were evidently made not only for the purpose of furnishing a suitable subject (Domestic Science) for girls but also for allowing lighter alternatives to the academic subjects which may not suit the feminine intellect. As such, these measures did a great deal of disservice to the cause of girls' education by the implication of the inferiority of the feminine intellect.

The Sergeant Report for post-war education in India suggested a trilateral plan with two branches for boys (academic and technical) and a third for girls with special emphasis on subjects suitable for them.

These attempts at providing a segregated corner for girls in the general system of education for boys suffered from two fundamental defects - one arising from the other. Firstly, the assumption that the feminine brain was inferior, unscientific and unacademic was unwarranted and, secondly, the attempts at separating girls' education from boys' could not be acceptable in modern times where boys and girls were expected to work and compete together. The correct approach would have been not of bifurcation but of unity in diversity.

Such an approach was made in the plans based on the recommendation of the University and Secondary Education Commissions formulated after Independence. In the present *plan for the devlopment of higher* secondary school education, provision has been made for different types of talents and social needs in the background of a common general education. Home science as a general subject as well as an elective stream has been allowed for girls. The fine arts and commerce streams also, seem to find *special acceptance in girls' schools.* This seems to be an ideal plan but a close examination would reveal that while the pros have been well-considered, some of the cons have been overlooked.

Two distinct sets of reasons are possible to justify a specialised curriculum for girls. In the first place, such a curriculum would *fit woman for her* duties in the home which still remains the main occupation for the majority of women, by providing subjects they need for the purpose in the place of that part of boys' education which leads to "economic efficiency". Secondly, it appears to pre-suppose that women are intellectually weaker and less academic than boys.

These reasons are untenable in the context of modern life. The major occupation of women may be the home, yet all women do not marry and even married women

sometimes need to earn their living. On the other hand, the argument that women are not fit for higher academic studies has long been refuted by their high grade performance in all these fields. The ideal education for women, therefore, should combine the two purposes of family and economic efficiency.

Two of the practical streams to which girls have taken are fine arts and commerce. Though these are not specially meant for women, they have been considered to have special aptitude for them. The commerce stream is definitely one of economic efficiency and a natural one for girl students to take up in as much as women have been always considered to be better than men as typists, receptionists and private and confidential secretaries.

There is not much to say about this except that it is one for career girls to follow as offering immediate prospect of employment as well as avenues for further training and higher studies.

Fine arts is considered to suit the fine and delicate nature of women, but this idea has developed in the face of the fact that most of the best artists and craftsmen are men. The one defect that can be pointed out in this course is that it offers very little future prospects of employment for average students. The College of Arts and Crafts at Calcutta does not yet offer degrees, and there is very little scope for students of fine arts to obtain employment without a higher and recognised qualification.

Home science is considered to be par excellence the subject for girls. It would serve the purpose of family efficiency perfectly well if the curriculum were modified to remove the following deficiencies :

(a) The syllabus of the subject suffers from too great an emphasis on theory and has too little practical bias.

(b) The syllabus is too westernised and standards of household work and home decoration are too high for lower middle income groups. Most of the labour-saving devices are of the western type while Indian accessories have been overlooked. The framers of the curriculum should have consulted the home science advisers and specialists in the Community centres for they have been able to adapt many of the scientific approaches to Indian standards.

(c) Again, in considering the element of "economic efficiency", we find that the course has become a blind alley in as much as it offers hardly any scope for job placement, further training or higher academic studies.

There is only one college of home science in West Bengal and none of the colleges of general education offers home science as a subject. A girl who takes home science as an elective subjects in school may pursue college education only if she drops this subject, while a girl who passed out from the home science stream of a higher secondary school would be faced with a complete denial of college education,

On the other hand, heads of schools with the home science stream are completely in the dark as to what posts or what further training courses would be open to these girls in case they were in need for employment. As a result of these uncertainties schools which introduced this stream are regretting their first enthusiasm. It is very probable that home science streams will fail to attract students unless quick and effective steps are taken to change the position

In the light of the above discussions, the following suggestions are made for the modification of the character and status of the curriculum in home science :

(1) The practical aspect should be intensified as in the technical and commercial streams.

(2) The subject should be introduced in a large number of degree colleges at pass and honours levels.

(3) A sufficient number of colleges for women should open home science departments.

(4) A "masters" course in home science should be introduced in as many colleges as possible.

(5) Gradually, all posts of home science teachers in secondary schools should be reserved for trained graduates with home science at the degree level and all college posts for masters in home science.

(6) Home science should be a required subject for appointment to certain posts in the community projects; for selection for training in these fields and nurses' training courses and an allowed subject for the study of medicine and psychology at the college level.

(7) The home science stream in schools should be given equal status with other streams.

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IMPROVING TEACHING PERSONNEL

S. R. Thapar

That the teacher is the key to the success of any educational system is a well-known truth, still the hard fact is that, in respect of status and income, he gets from the society he serves only neglect and disregard. How to improve the teachers' position economically, socially and professionally is discussed in this article by Shri S.R. Thapar, who is Deputy Director in the Directorate of Education, Delhi. —Editor.

The quality of a country's educational system depends largely on the quality of its teachers. That quality in turn is the resultant of many factors, of which the teacher's personal equipment is, perhaps, the most important. Another significant factor that determines the quality of teachers, as indeed the quality of any professional group, is the recognition that they enjoy in society. The term 'recognition' connotes not only the monetary return available to the teacher for his services, but also the esteem in which he is held by society.

Considered from this point of view, the conditions of the teaching profession in India leave much to be desired. It is not surprising therefore, that many suitable men who become teachers do so as a *pro tem* arrangement, until some better job comes their way. The profession is thus subject to a centrifugal movement, the better material in it being constantly withdrawn leaving it depleted of talent. In a study conducted recently by a premier teacher training institute, teachers were asked to state the reasons that decided their adopting this profession. The following four reasons received priority.

(*i*) It is a noble and honest profession ;

(*ii* It is difficult to take to another profession due to weak financial position ;

(*iii*) Service is sure after completion of training ; and

(*iv*) Failure to land elsewhere on a job.

The altruistic sentiments expressed in the first statement should be placed against the personal consideration in the last three statements. The inadequacy of teachers who enter the only profession for the last three

reasons is too apparent.

Various measures are being taken by the Government and non-government agencies to improve the quality of teachers, but the problem needs to be dealt with on a more comprehensive scale.

Economic Condition of Teachers

The first step forward to improve the quality of teachers should be towards raising their economic, and thereby their social status. In the present day it is naive simplicity to expect teachers to be contented with the dubious halo of "nobility and sacredness". The Secondary Education Commission, who were painfully confronted by the unsatisfactory social status, salaries and service conditions of teachers, said, "On the whole their position to-day is even worse than it was in the past, and it compares unfavourably not only with persons of similar qualifications in other professions, but also, in many cases with those of lower qualifications, who are entrusted with less important and socially less significant duties...."

The obvious solution to this deplorable situation is of course the grant of increased salary to all categories of teachers. Although pay scales for teachers in different states of India, depend upon the local pay structure as well as on the financial position of the State Government concerned, it has to be emphasised that they should compare favourably with the salary scales in other professions demanding similar qualifications and responsibilities.

A second step would be to provide incentives to teachers to stay on in the profession, by offering chances of promotion to administrative and supervisory posts in the Central and State Government Services. If necessary a minimum period of five years' service as a teacher in a recognised institution may be prescribed as a necessary qualification for such promotion. Other incentives would include the provision of pension-cum-provident fund-cum-insurance benefits on an all-India basis, facilities for travel at concessional rates, educational tours, or vacations at health resorts, free medical service, and educational concessions to their children up to the high school stage.

The Ministries of Education at the Centre and the States have already recognized the urgency of the problem, and have initiated schemes to increase the salary scales of all categories of teachers as well as to provide them with other benefits.

Social Status of Teachers

It is a hard fact that the social status of an individual depends to a very great extent on the material position he holds. Judged by this criterion, teachers are not too happily placed in the social context. The mal-position often results in a sense of inferiority and frustration among teachers, leading to stunted or warped personalities. If we believe that attitudes are contagious, and that education is nothing but the influence of one personality on another, the depressing effects of these teachers on the children under their charge can be very well imagined. It is in fact in the ultimate good of society that the

plea is made for the grant of higher social recognition to teachers. In the words of Shri K.G. Saiyidain, "If we desire to measure the cultural worth of a people or appraise the values which function in any society, it would be a good criterion to ask : *"What is the social status and prestige of teachers in that community ?"*

At the same time, social recognition is not something that is given ex-gratia to an individual or a group ; it has to be *earned* by the teacher through his integrity, uprightness and devotion to duty. This leads to a consideration of the factors which have a direct effect on the professional preparedness of the teacher.

Professional Education

The importance of the teachers' professional competence is too well recognised to require justification. Although teachers are said to be 'born and not made', the *born* teacher can be made more efficient, and the *made* teacher moulded to as near perfection as possible, through a process of teacher education. What needs emphasis here is that the period of teacher education should be enough to provide the teacher with the technical knowledge required for the profession. For primary grade teachers, the period of training should not be less than two years after matriculation. For secondary grade teachers, the period may continue to be one year for some time to come, but pre-education courses in educational psychology and methods should be introduced as an elective subject in the degree course in order to equip them fully for the profession. The concurrent system of teacher education obtaining in the U.S.S.R. may be considered in this connection.

Pre-Requisites for the Teacher

1. All teachers must be subjected to aptitude and intelligence tests at the time of entrance to the professional course.

2. Physical condition, and the personality of the intending teachers, must be taken into consideration at the time of selection.

3. Interest in and aptitude for guiding co-curricular activities should also be given due weightage.

4. Suitable candidates who display an aptitude for teaching, may be given maintenance allowances if their economic condition stands in the way of their entering the profession.

General Recommendations

1. Incentives like selection grades, and merit certificates may be offered to those who show noteworthy success in their jobs. The scheme of National Awards may be supplemented by a scheme of State Awards for outstanding men and women in the profession. This would ensure a wider coverage.

2. A code of professional ethics may be drawn up, and those who violate it may be debarred from continuing in the profession after due warning.

3. All categories of teachers must be expected to go in for refresher courses once in five years or oftener.

4. Teachers must be helped to keep themselves abreast of the latest

developments in educational theory and practice, and for this purpose, the schools must have a good number of reference books in the school library, and also subscribe to suitable magazines on education and psychology. Facilities should also be offered to the teachers to take up research projects in education.

5. Promising young men and women who evince keen interest in their profession should be afforded opportunities to visit educational institutions in India and abroad at Government expense.

Before concluding, it needs to be emphasised that no amount of extraneous factors for the improvement of the quality of the teaching profession can succeed unless the teachers themselves realize their full responsibility, and make sustained efforts towards improving their own status and the quality of education they impart to the children under their care.

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A REQUEST

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—Editor

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REMEDIAL TEACHING IN MATHEMATICS

R. H. Dave

The Vanita Vishram High School, Ahmedabad, recently conducted an experiment in remedial teaching in mathematics in Class IX. Shri R.H. Dave, Evaluation Officer in the Directorate who was associated with the study, describes in this article the observations and conclusions that emerged from it.

—Editor

A scrutiny of results of the first examination held in September, 1959, in the Vanita Vishram Girls High School, Ahmedabad, revealed certain problems. For the purposes of proper evaluation the results were summarized classwise, subjectwise, and teacherwise. The relevant portion of the summarization is given in Table I.

TABLE I

Subjectwise Average Percentage of Passes and Scores

Subject	Average Pass percentage	Average Score percentage
1	2	3
Regional Language (Gujarati)	67.0	39.6
Hindi	61.6	37.8
English	59.6	40.1
Sanskrit	64.3	40.0
General Science	82.1	46.5
Mathematics	44.5	35.1
Social Studies	69.0	40.5

It is evident from the above table that the average achievement of pupils in mathematics is the lowest. Column No 2 also shows that the average pass percentage of the pupils is 60 and above, while in mathematics it is as low as 44.5. Under these circumstances it was decided to implement a remedial teaching programme in mathematics throughout the school. Hence, early in November, 1959, a meeting of all mathematics teachers of the school was convened with a view to studying the probable causes of low achievement in the subject.

Probable Causes

The probable causes as enumerated and discussed by the teachers were :

1. Intermittent revision with the help of sequentially graded exercises was almost lacking.
2. Scrupulous drill work necessary for the fixation of various concepts and processes was not adequate.
3. Pupils tried to work sincerely but gave up the effort when

they came across even small difficulties. They seemed to lack self-confidence, which was absolutely essential for progress in mathematics.

4. No individual attention was paid to the upils, particularly the retarded ones. Consequently the special difficulties of such pupils remained unsolved, thus hampering their progress.
5. Pupils were seen to be weak in basic mathematicl knowledge and skills such as mastery over tables, relationships, speed and accuracy in computation, etc. The revision necessary for refreshing mathematical skills and understandings before beginning the new course was not done.
6. Mathematics being an optional subject at the S.S.C. level in the State of Bombay, it is generally neglected by the present pupil population. Besides, aggregate passing in mathematics encourages negligence in one branch or another on the part of the pupils. In such circumstances there was no incentive to study the subject.

The Remedial Programme

Class IX was selected for an intensive experimentation and observation about the impact of the remedial programme. The three teachers who taught the subject in the three divisions of the class held a number of conferences throughout the experiment. They consulted teachers of other schools and also other personnnel in resolving their difficulties. The Principal of the school took personal interest in the experiment and gave valuable suggestions to the teachers. The important measures adopted during the experiment were as follows :

1. Graded exercises for effective drill work, particularly in Algebra, were prepared and used.
2. In order to develop self-confidence, the following techniques were adopted :

   (i) During class teaching, more scope and motivation was given to pupils to tackle the difficult points themselves independently, the teachers extending help only when it was absolutely necessary. Even then they indicated the direction in which to tackle the points instead of suggesting solutions.

   (ii) Graded work was planned and given to the weak pupils so that they might regain confidence and upgrade their progress.

   (iii) Group interaction brought about by making the pupils work in small groups also helped in instilling self-confidence.
3. Individual attention solved the special difficulties of weak pupils and thus enabled them to catch up with the class.
4. During the winter break, extra help was provided to pupils, especially the weak ones.
5. No new unit was started until the previous unit was learnt satisfactorily by almost every

pupil of the class so that the sense of success might stimulate interest in the subject.

6. A well-designed procedure of revising previous units before commencing a new one was adopted, strengthened by planned work of intermittent revision.
7. Upgrading the ranks of these pupils who succeeded in class work in mathematics introduced an element of competition sufficient to provide motivation.
8. It was also perceived that sequential exercises helped in developing deductive thinking in pupils. For example, before beginning the teaching of theorems, the concept regarding the nature of proof and the ability to deduct proofs by logical reasoning might be developed by means of simple exercises, e.g. In a parallelogram ABCD, if $\angle A=60°$, prove that the exterior $\angle C$ is 120°. or, prove that in a right angled triangle, each of the two angles other than the right angle is acute.

Results of the Experiment

After trying these remedial measures for a period of eight weeks, the results were evaluated, taking care to see that the comparison was as reliable as possible. For example, the paper-setter in the case of both the examinations was the same. The same teachers valued the answer-scripts of the same division during successive tests, following the same set of rules throughout. The pattern of question papers, the method adopted for valuation, the time factor, and other aspects of testing were also uniform in the case of the two examinations. Pertinent portions of the comparative summarization are shown in the following tables :

TABLE II

Average Pass Percentages of the Two Examinations

Class and Division	First Exam.	Second Exam.	Difference
IX A	29.7	64.9	35.2
IX B	42.1	50.0	7.9
IX C	50.0	71.8	21.8

The last column in the above table indicates a significant rise in the percentage of passes. Class IX A which had ranked low in the first examination showed a great spurt in the second. Even class IX C which was comparatively superior, showed a further big jump upward.

TABLE III

Average Scores in the First and the Second Examination

Class and Division	First Exam.	Second Exam.	Difference
IX A	30.5	46.7	16.2
IX B	31.2	36.7	5.5
IX C	41.4	48.7	7.3

Table III shows that even in the case of average scores, all the three divisions of the class showed a positive improvement although the rise cannot be said to be as marked as in the case of the average pass percentage. It

might possibly be due to the fact that such a brief period as eight weeks devoted to remedial teaching was not sufficient to bring about a greater increase. One is therefore led to conclude that the remedial programme helped the weak pupils more than others. In fact, the remedial programme as a whole laid more stress on upgrading the large number of weak pupils beyond the border line rather than on helping the small group of bright pupils to do better. This is a shortcoming in the programme and would require to be corrected in subsequent efforts. However, the effort did succeed in achieving its goal of resolving difficulties of a majority of pupils to make them reach the passing level.

Other Outcomes of the Endeavour

The teachers obtained a deeper insight into the difficulties of the pupils and the techniques of helping them. They also got familiar with graded exercises on various topics in mathematics. Incidentally, the school as a whole received a stimulus to make conscious and vigilant effort to improve pupil-achievement, not only in mathematics but in other subjects also. The teachers in charge of the try-out have discovered that it is absolutely necessary in a subject like mathematics to segregate weak pupils from the rest at least once a week for two school-periods to give them individual guidance and remedy their deficiencies.

Further Problems for Study

Among the problems arising out of the experiment for further study, the following two have attracted the attention of the teachers.

1. It would be worth while to study what learning experiences should be provided to develop deductive reasoning. Scrupulously contrived exercises involving simple deductions would have to be prepared to make pupils more independent of teachers to study theorems and to solve riders.
2. Suitable procedures should be devised for grouping weak pupils in the subject and giving them individual guidance. Material in the form of exercises, aids, and reading material should be developed in order to facilitate pupil-work and to serve as a time-saving device for the teachers.

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INTERNAL ASSESSMENT IN THE PUNJAB UNIVERSITY

We publish below a report received from the Punjab University on the measures taken by it to introduce internal assessment in the higher secondary and matriculation courses in the State. —Editor

The higher secondary course of three-year duration was introduced in April 1958. The purpose of this course is to make instruction at the secondary level more comprehensive and diversified. A student has to select six core subjects and one out of seven elective groups. In each elective group a student has to take four subjects. The elective groups provided are humanities, science, technology, commerce, agriculture, fine arts, and home science.

The examination in the core subjects is held at the end of two years and in the elective group at the end of the third year of the course.

Twenty-five per cent marks in the case of core subjects and 20 per cent in the case of the elective groups, have been reserved for internal assessment. The headmasters send to the University five assessment returns pertaining to core subjects, three in the first year of the course and two in the second. In the case of subjects of the elective groups, four returns are required, two in the second year and two in the third year. In order to secure uniformity of standards in internal assessment, it has been provided in the rules that where there is a disparity of more than 10 per cent in the average marks obtained by students in the internal and external assessments, the internal assessment awards are increased or decreased so as to eliminate the disparity.

Internal Assessment in the Matriculation Examination

To facilitate a smooth change-over from the matriculation course to the higher secondary course and to give a sense of responsibility to the teacher concerned and also to improve discipline, internal assessment has been introduced for the matriculation course also with effect from the admissions of April 1958. Twenty-five per cent of marks have been set apart for internal assessment in English and mathematics, and 20 per cent in other subjects. The headmasters of the schools submit to the University the awards based on internal assessment thrice in the year in respect of students studying in the ninth class and twice in respect of those studying in the tenth class.

Introduction of the Three-Year Degree Course

The present Intermediate examination followed by a two-year degree course will be replaced by the three-year degree course in 1961. The pre-medical course will then be of one-year duration and students passing the matriculation examination will have to pass a preparatory examination at the end of a one-year course before joining the University.

INTRODUCING BOOKS ON EVALUATION

As second in the series of digests of books on evaluation which we began last month, we give below a brief introduction to the book "Specimen Objective Test Items" by J.R. Gerberich. Shri P.D. Sharma, Evaluation Officer is again the anthor of the digest. —Editor.

"Specimen Objective Test Items"—A guide to achievement test construction by J.R. Gerberich, Longmans, Green & Co., 1956.

The primary purpose of this book, as the title itself suggests, is to serve as a guide to the classroom teacher in construction of achievement tests. Every teacher is and should be concerned with the appraisal of pupil achievement and with the use of test results from such appraisal to the ultimate advantage of the individual pupil. Construction of achievement tests is generally considered to be the specialists's job. The author is, however, of the view that the ordinary classroom teacher can (more easily than is usually thought) become reasonably proficient in test construction for the pupils he teaches, evaluate his pupils' achievement without necessarily becoming a skilled test technician, with the added advantage that he can constantly improve and objectify his tests and techniques of measurement and evaluation.

The book presents a wide variety of measuring and evaluating devices, mainly of the paper and pencil type, in relationship to instructional and learn ing outcomes. By a study of these samples, the teacher is bound to gain a deep insight into the technique of appraising outcomes of teaching and thereby improve the tests and techniques with which he is already familiar.

The book is also intended to serve, though secondarily, the test specialist, for whom it provides several systematic classifications of tools and techniques used in achievement testing. The author hopes that "the classifications will be useful not only for such clarification as they may furnish but also in their possible implications for desirable developments in areas of achievement measurement not now well served."

The book is laid out in four parts. Part I to which only the first chapter has been devoted, presents the major concepts involved in achievement testing. The various steps in test construc-

tion, namely, (a) determining the outcomes of instruction or what to measure, (b) developing the test or the how of measurement, and (c) validating the test or how good the measure, have been discussed. Under learning outcomes both tangible as well as intangible outcomes have been considered so as to obtain a full picture of the pupils' achievement. Among the important characteristies of a good test, validity, reliability, objectivity and adequacy have been stressed more than certain other minor ones.

Part II which can be said to be the most important section of the book from the point of utility to the teacher, presents samples of objective items for testing outcomes such as skills, knowledge, concepts, understanding, applications, activity outcomes, appreciations, attitudes, interests and adjustments. One chapter has been devoted to each of those outcomes, with the last chapter in this section dealing with evaluating in complex situations. The illustrative test items of which there are over two hundred have been drawn from different sources, books, journals, standardized tests and the like, and are representative of techniques used in measuring the variety of outcomes listed above. Before presenting the samples under different item forms, the author discusses in each chapter the meaning and types of the particular outcome under consideration and its relationship to other outcomes. This helps the reader to see clearly the samples in relationship to the nature of the outcome being evaluated.

The illustrations in this part have been very selectively chosen and help to provide the reader with sufficient insight and skill in judging the appropriateness of a test situation to the pupil behaviour under assessment.

Part III classifies objective test items used in achievement measurement, first by form, type and variety; secondly, by elementary and secondary subjects, and thirdly, by college and professional subjects. Three chapters are devoted to these aspects of classification of which the classification by form, type and variety is the most significant in so far as it helps to clarify relationships between item types and outcome types, the forms of stimuli to which he pupil responds in taking tests and the primary mental activity in which he engages in doing so. In addition, it brings out clearly the four basic item forms namely alternate-response and scaled choice, multiple choice, matching and completion, subdivided further into their basic types and then, their basic varieties. The classifications of the four forms are made clear by grouping the test excerpts presented in Part II under the appropriate type and variety in tabular forms.

Part IV consists of two chapters in which the various types of classroom tests and non-test tools and techniques have been categorised and described. Tests are classified into three categories—subjective, written objective and performance. Under the subjective type are included oral examinations, the essay and short answer tests. The written objective tests are informal as well as evaluative

and interpretive, the latter differing from the former mainly in breadth, difficulty and complexity of construction. The performance tests have been distinguished as requiring the manipulation of physical objects or materials or the application of physical skills not limited to oral or written responses by pupils.

Among the non-test tools and techniques, the cumulative record of pupils, teachers' reports to the home and pupil-rating scales are the tools in which data are supplied by the teacher, while questionnaires, pupil record forms, participation schedules, sociograms are the ones in which data are supplied by the pupils. Similarly, observation of pupils, anecdotal methods, interviews, case studies and teacher logs are the evaluative techniques in which data are to be obtained by the teacher, while open questions, diaries and autobiographies are mentioned as the techniques in which data are provided by the pupil.

Institutions and teachers experimenting on the evaluation approach and achievement tests in relation to objectives and behaviour outcomes would find the book useful, which not only introduces the reader to the vast variety of objective test items, but indicates how these items assess specific aspects of the pupils' knowledge and understanding. The book would also very well serve the interests of those who are already initiated into the technique of building and standardizing achievement tests.

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Notice

Back issues of Teacher Education for 1957 and 1958 are now available for supply at concessional rates. The price per copy is 18 nP.

—Editor

Editorial

It is increasingly being realised that in-service training of teachers is as much a function of teachers' training colleges as pre-service training. If training colleges aim at preparing good efficient teachers, they cannot rest content with their pre-service programme, however thorough and comprehensive it may be. This realisation, however, has come only gradually. There was a time when it was expected that training colleges would send out of their portals finished products who would do their job as teachers to perfection. When these results were not achieved, the training colleges were blamed for having failed to fulfil their function. The training colleges in their turn maintained that if their products failed to deliver the goods, it was because they did not receive in the schools conditions favourable for putting progressive ideas into practice. The fact of the case is that pre-service training can only be expected to lay the foundation of good teaching by giving basic knowledge about the theory of education, developing professional skills and building up certain professional attitudes. This would make a good beginning but increased efficiency would come only through a creative and critical approach to one's work and through contacts and discussions with others working in the same field. Routine experience would achieve but little. A student may leave the training college with the fervour of wanting to try out new methods and to make a critical analysis of his experience, but as years pass the enthusiasm generally dwindles because the environment in the average school is not congenial to the sustenance of a spirit of adventure and experimentation. The trained teacher, thus, gets into a rut and begins to do his work mechanically. The few investigations that have been carried out to make a study of the impact of training on actual school practices have shown that the impact is not perceptible on any large scale or for any length of time.

More important is the fact that education is not a static type of social service. It must keep pace with developing scientific thought, specially in the sphere of mental and social sciences, and with the economic, cultural and social changes that come into the life of society. All these changes will be reflected not only in educational methods and practices but in the underlying philosophy of education as well. A teacher will have to keep himself abreast of all these developments.

To enable teachers to keep up their desire for improvement based on a critical analysis of their own work and to keep them keenly aware of educational developments, several agencies must come together. The schools themselves, Teachers' Organizations, the

Inspectorate and the Training Colleges must make consistent and combined efforts to provide opportunities to teachers on the job.

With the establishment of Extension Services, Training Colleges have begun to assume a leading role in providing in-service training. At the Workshop of Co-ordinators of Extension Services Departments held recently, it was realised how teaching in many schools has been vitalised through the impact of these services. Some in-service training should be possible within the school itself, if the teachers are stimulated to work out their ideas and given freedom and encouragement to do so. A good school with a keen and alert headmaster who believes in securing the co-operation of his teachers in planning the school work can provide excellent in-service training. But the school itself will need some stimulus and must come into contact with other schools. Such a stimulus can be provided by the Extension Services Department of a Training College which can also arrange for contacts with other schools.

To enrich the teacher's personal and professional experience and to make him aware of new ideas and practices, a wider field than the school itself would be necessary. This field the Training Colleges are providing through their *Extension Service Departments.* The experience of extension work gained so far has been valuable and because of the flexibility left in the programme effective ways of organising in-service training have emerged. This was obvious at the Co-ordinators' Workshop where a valuable exchange of experiences took place. One agency that needs to be drawn more actively and directly into the programme is the Inspectorate. It is a good sign that the State Education Departments have begun to realise the value of good in-service training and it is expected that it will not be long before in-service training or extension work will be recognised as an integral part of the functions of a Training College.

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The Composite Reporter

One of our readers giving his appraisal of *Teacher Education*, a flattering one on the whole, suggested that the Extension Services Newsletter with its details of activities at each Extension Centre did not appear to be particularly interesting and that since outstanding activities of the centres were being highlighted, there did not appear to be any need for a monotonous rigmarole of events and activities of the same type. The reader was not connected with any Extension Centre and we thought it would be worth-while consulting the persons concerned before we decided to change our time-worn practice. So the suggestion was referred to the five zonal conferences of Honorary Directors and Co-ordinators of Extension Services Departments. At all except one conference, opinion was unanimous that the Extension Services Newsletter must continue. One Co-ordinator even remarked that what he looked forward to in *Teacher Education* was the Extension Services Newsletter and the Composite Reporter. In view of this decision, this regular feature of ours will continue in spite of our reader's comments and suggestions. After all, *Teacher Education* grew out of the modest beginning of Extension Services Newsletters which were originally cyclostyled and circulated. Out of a sense of loyalty if not anything else, this item deserves to be continued. And this is perhaps the only feature that succeeds in eliciting a spontaneous response from the readers. We often get letters protesting that we have failed to publish an important activity of a Centre or the Centres' lists of publications. Occasionally, we must admit, we also get letters of thanks for having highlighted the activities of some of the centres.

* * *

DEPSE or its staff contributes very little to the medley of noises and sights on the open square in front of its office between the office building and the Delite Cinema. A clerk or two may buy the tempting fare that vendors display right in front, but that is all. No one from the DEPSE figures in street brawls or joins in beating up rash scooter drivers when they have caused an accident nor does anyone give performances like the man with the snake. But when the CHS Van with its X-ray apparatus came for an examination of the staff under the scheme of mass X-ray of the Central Government servants in Delhi and New Delhi, DEPSE and its staff became the centre of attraction. As many as 68 members of the staff from the Director down to the peon and the sweeper had to be

screened. The queue that the staff made and the hustle and the bustle that accompanied the arrival of the Van brought people from far and near. Families came with children to see the performance and every time that a person entered the van, several heads were pushed in to see what was being done behind the curtains. Three peons guarded each door of the van, with no purpose. When women members of the staff on entering the van were asked to remove their gold necklaces, excitement ran high among the spectators. They thought that this was a fine imposed on them. It took nearly two hours for the man power and woman power in DEPSE to get-themselves screened and for two hours there was an audience that was kept intrigued and entertained. For once in our life we felt we had contributed our share to the spirit of revelry, noise and confusion that pervades the square.

* * *

Has the staff of the DEPSE got used to the new order of full working days on Saturdays, one of our correspondents asks us? Orders are orders and disciplined government servants that we are, we are present physically in the office till 5 p.m. every Saturday, but the mind still puts up a resistance. On Saturday morning one wakes up with the happy feeling, "Today is Saturday —free at 2 p.m." And then one realises with a sigh that Saturdays no longer are different from other working days except the last Saturday of the month which seems to come at such long intervals. On Saturday afternoon the spirits begin to flag at 2 p.m. and have to be sustained with extra cups of tea and a few extra cigarettes. It can be proved statistically that the consumption of tea and cigarettes reaches a high level mark on Saturday afternoons. Each cup and each cigarette brings cheer to the weary brain and helps one to put in another spurt of effort and one manages to pull on. Is it a question of habit or is it that the mind or the body really needs rest after five days of hard work ? If it is habit alone, one hopes that one will gradually get oneself acclimatised to the new order. If it is otherwise and nature requires rest, one wonders what will happen to the new order.

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We had the following account of an educationist's first air trip straight from the horse's mouth. He was one of the non-entitled Government servants under the rules, not allowed to travel by air, but the boss, a fortunate entitled person, had to attend an important meeting and needed the support of his assistant who had studied the papers and prepared the case, so as a special favour the person was allowed to travel by air. The non-entitled educationist was thrilled at the opportunity given him for air travel. In his excitement he spent a sleepless night, got up early in the morning, spent a long time over his toilet in the morning, put on his best suit and turned out well groomed for his first air trip. When he reached the airport he was asked whether he would like to get himself insured. While he was pondering over the matter, the boss hove in sight and said to the Insurance

agent, "What is the earthly use ? I have insured myself on so many air trips but no good has even come out of it." The boss's logic appealed to his subordinate and he waved the Insurance agent away with a dignified shake of the head. When the time came, with a trembling heart he got into the plane and seated himself in a seat. The lit up sign of 'Fasten your seat belt' puzzled him a little, but a kindly neighbour explained the technique of fastening the belt and assured him that it was a mere conventional precaution and that there was no real danger of anybody, being thrown out of his seat. He sat bolt upright and continued to do so even after the plane took off. The air hostess, moved by his plight, asked him whether he would like to relax, and before he knew where he was he found the back of his seat slipping from under his own back which was straight at an angle of 90°. Taking the line of least resistance he allowed his own back to follow the seat and felt comfortable reclining at an angle of 45°. After the plane had been in flight for an hour or so the air hostess asked in her sweet voice, "Ready for breakfast, Sir ?" He had taken his parathas and sabzi because he did not want to waste his money on the air company's expensive breakfast. He refused the breakfast, much to the air hostess consternation. Glancing around after a little while he found the boss tackling his breakfast with great gusto. He guessed that the breakfast could not be costly if his boss ordered it and was eating it with such obvious relish. "How much does it cost, Sir ?" He asked shakily and the boss replied, "Don't you know that meals are free on an air journey?" He cursed himself for having been such an ignoramus, but having twice refused the breakfast he could not pluck up courage to ask for it again. He suffered in silence and his only joy was that everybody appeared to treat him as the boss and the boss as his assistant. Soon there was a landing at the airport and everybody had to get up. After entering the airport, when he saw the sign of 'Restaurant' he made a bee line for it and ordered all the rich fare that the Restaurant could provide. Heartily he invited the boss and another casual plane acquaintance to join him. He thought he was making up for the lost opportunity. After a sumptuous meal he was just going away when the boss asked, "Do you expect me to pay for all that you ordered ?" He was stunned. Were not all meals free on an air trip ? The boss explained that it was so only when one was up in the air. On terra firma one was expected to pay for what one ordered unless the plane had failed to supply the victuals on the flight. Disgusted with his own ignorance, he took out his purse for what he, his boss and the friend had eaten. A brochure must be prepared giving all the information about air travel for the uninitiated traveller, he said to himself and decided to ask the staff of Extension Programmes to prepare one. What were Extension Programmes for if such practical information relating to various affairs of life was not made available to the unwary novice ?

EXTENSION SERVICES NEWSLETTER

NORTH-WESTERN ZONE

The Co-ordinator of *the Extension Services Department, Jullundur,* visited three local higher secondary schools and discussed with the staff the implications of the higher secondary scheme, the organisation of guidance services in schools, and the syllabi in general science and social studies, as core subjects in the higher secondary course. The Department arranged film shows and loaned audio-visual equipment to three schools. Four meetings of the central science club were held during the period. The Engineering group of the club made several models based on scientific principles.

At the instance of the Punjab University, *the Department of Extension Services, Chandigarh,* arranged a two-day seminar on the organisation of 'internal assessment' in schools. The seminar which was inaugurated by Dr. A. C. Joshi, Vice-Chancellor, Punjab University, was attended by more than 50 heads of schools. The Department also collaborated with the training college in the celebration of the 'Basic Education Week'. At a one-week workshop of science teachers and student-members of the central science club, the participants met in five different groups and prepared useful working models and charts A meeting of the Chandigarh Teachers' Association discussed problems of school discipline. Two extension lectures on "Teacher Training in America" by Mr. Arthur Goodfriend and Miss Child of the U.S.I.S. were arranged by the Department. The Co-ordinator visited a number of schools during the month to discuss various problems with the staff of the schools.

The Extension Services Department, Patiala, organised a state-level advanced workshop in general mathematics at which eleven teachers participated. With a view to encouraging extra-curricular activities in schools, the Department organised an 'educational mela' for four days during which one-act plays and declamation contests were held. School visits helped to discuss different educational problems with the staff.

The Department of Extension Services, Udaipur, completed the assessment of the science clubs in the area. The Co-ordinator of the Department discussed with the staff of Govardhan Multipurpose Higher Secondary School, Nathdwara, new-type tests in various subjects prepared by the staff of the school. A six-day state-level workshop in general science was attended by eleven teachers. A series of 8 lectures on recent developments in educational theory and practice, and a three-day workshop for science teachers of middle

schools were other activities of the month. Under the auspices of the central science club, a five-day exhibition was held of articles made or collected by students and teachers of various local institutions. The Department arranged two film shows and two lectures by experienced science teachers during the exhibition.

The Advisory Committee of *the Extension Services Department, Bikaner,* met during the month to plan the Department's activities for the current quarter. The Department also organised an evaluation workshop in English for 14 teachers and another in Hindi for 15 teachers.

Under the auspices of *the Department of Extension Services, Central Institute of Education, Delhi,* a seminar on the "Preparation of Syllabus, Text-books and Examinations in English for Middle Classes" was conducted by Prof. L.A. Hill, Chief Education Officer of the British Council. Thirty-three teachers attended the seminar. At a meeting of the Teachers' Study Circle, Dr. S. M. Corey spoke on "Learning to Think Requires Practice in Thinking." Principals of schools met to discuss problems of discipline in big schools and to review the activities of the Department.

NORTHERN ZONE

An in-service training course in the use of audio-visual equipment was organised by *the Department of Extension Services, Government Constructive Training College, Lucknow,* when training was given to 19 eachers in the use of the epidiascope, filmstrip projector, 16 m.m. sound projector and tape-recorder. A similar course was also held for the benefit of lecturers of the local training colleges. A meeting of the central science club was attended by 21 members.

The Department of Extension Services, Allahabad, arranged a two-day seminar on the teaching of local studies for 23 teachers. Besides talks and discussions, the participants worked out a few specimens of teaching units with local themes as centres of study. The Co-ordinator visited five schools in connection with the try-out of test-material. The Department also organised 8 film shows and participated in the childrens' film festival organised by the District Audio-Visual Association.

The Co-ordinator of *the Department of Extension Services, Agra,* visited four science clubs in connection with their assessment. The Department has selected six institutions for implementing the programme of intensive work in schools. Several visits were made by the Co-ordinator and members of the college staff to these schools in connection with the programme. The Department also organised film shows in five schools during the month.

A state-level evaluation workshop in social studies was organised by *the Extension Services Department, Isabella Thoburn College, Lucknow.* Fifteen participants worked on learning experiences and on preparing test-items in history, geography and civics. The Department also assisted in trying out test-material in history and civics in three schools. This programme had the

wholehearted co-operation of teachers who had attended the evaluation workshop previously.

A state-level evaluation workshop in social studies was organised by *the Extension Services Department, Meerut,* for a period of six-days. An extension lecture by Mr. Moris Zince, an Australian Educationist, on the "System of Education in Australia" was an interesting feature of the month. The Department also arranged two film shows.

The Department of Extension Services, Jabalpur, arranged a seminar on evaluation, which was attended by thirty-seven participants from all over the State. The topics discussed included evaluation in secondary schools, internal assessment for annual promotions, internal assessment for final examination, high incidence of failure—their causes and remedies, and the dynamic method of teaching. A seminar on library science, school visits to assess science clubs and to render guidance services and 15 film shows were among the other activities at the centre.

A seminar on the Teaching of History organised by *the Extension Services Department, Aligarh,* at which twenty eight teachers participated, discussed the meaning of history, teachers—their outlook and problems, the syllabus in history and methods of teaching it, and the equipment, text-books, maps, and charts required for the teaching of history. The Department has also commenced a practical course on the use of 'Electricity in Daily Life' for the teachers of Aligarh. The course is being held in weekly sessions and is likely to continue till the end of March this year. Two meetings for the librarians at Aligarh and Etah helped to discuss the re-organisation of school libraries. Two meetings of the study circles in art and mathematics were held during the month. The Co-ordinator also visited five schools along with other members of the staff of the Department of Education.

EASTERN ZONE

A state-level seminar of Headmasters and Educational Officers was organised by *the Department of Extension Services at the Teachers' Training College, Turki.* The seminar was directed by Shri R.S. Sinha, Deputy Director of Education, Bihar. Among the topics discussed were the measures to improve standards of attainments in secondary schools, the use of dynamic methods of teaching, home work and correction, internal assessment at the final examination, causes and remedies for high incidence of failures, library work and the development of reading habits among students.

Thirty teachers participated in a group discussion on "Language Teaching." During his school visits, the Co-ordinator discussed the desirability of opening science clubs and establishing class libraries.

The Extension Services Department, Bhagalpur, arranged a one-day course in English at which the Co-ordinator spoke on "The structural approach to the teaching of English," and accompanied it by a demonstration lesson.

A state-level workshop on evaluation in general science and mathematics was attended by eight teachers. A meeting of the study circle discussed ways of developing the reading habit among students. Four school visits and film shows in five schools were the other activities at the Centre.

Under the auspices of *the Extension Services Department, Cuttack,* two state-level evaluation workshops in English and social studies were organised during the month, and were attended by 27 teachers. Methods of improving teaching in different subjects were discussed at school visits.

The Extension Services Department. David Hare Training College, Calcutta, continued the week-end seminar on history. A part-time course in music for twelve teachers of selected high schools was also arranged. A follow-up meeting of the teachers of English who had attended the summer course gave opportunity for the participants to report on the progress achieved in the application of the structural approach in the teaching of English. Mr. A.P. Weaver of the British Council and Mrs. B. Sarkar who had conducted the course were present at the meeting to help teachers in meeting the difficulties pointed out by them. A meeting of the study circle of science teachers was convened where Shri M. Datta spoke about his experiences of the last annual general conference of the All-India Science Teachers' Association held at Jabalpur. Several meetings of the central science club were held when the members of the college science faculty lent their full co-operation in conducting its activities. Shri R.K. Kapur, Deputy Educational Adviser, Ministry of Education, accompanied by Dr. E.R. Towers and Dr. F.M. Fletcher, T.C.M. Consultants, visited the Department during the month.

An "Educational Week" was organised by *the Department of Extension Services, Institute of Education for Women, Calcutta.* A one-week refresher course for heads and teachers of secondary schools formed part of the programme. Among the topics discussed at the training course were the problems of discipline, maintenance of cumulative record cards, problems in education and evaluation, and projects in schools. Film shows on "Guidance" and "New Methods of Teaching" were exhibited during the week. At a three-day seminar on the "Improvement of Teaching Methods," more than 250 teachers and teacher-trainees worked in groups on the teaching of different subjects. A symposium on "Art in Education" was attended by several teachers of arts and crafts from schools and training colleges.

The Extension Services Department, Hooghly, is organising a long-term week-end course on spoken English. Twenty-five teachers of English from three schools are attending this course, which will extend over 6 to 7 weeks. The Co-ordinator visited an associated school in connection with the opening of an exhibition of scientific items organised by the school. Library and audio-visual services of the Department continued to function as usual. Out of twenty units of mobile library

service available at the centre, 19 have already been distributed.

A week-end seminar on the "Organisation of Science Clubs" was organised by *the Department of Extension Services, Shantiniketan*, when projects in physics, chemistry and biology, suitable for junior and senior groups of students in high schools were discussed and many interesting experiments were improvised with simple articles. A meeting of the "Future Teachers' Study Circle" was held to discuss the maintenance and use of cumulative school records. A number of schools were visited by the Honorary Director and the Co-ordinator.

CENTRAL ZONE

The Department of Extension Services, Ahmedabad, organised six seminars in different schools on the structural approach to the teaching of English, evaluation techniques, science clubs, objectives in the teaching of geography and the teaching of science and mathematics. A discussion on the educational system of the United Kingdom was arranged under the joint auspices of the Extension Services Department and the Headmasters' and Secondary Teachers' Organisations. Three eminent educationists from the United Kingdom participated in the discussion which was attended by nearly 100 teachers. The Co-ordinator visited several schools in connection with the evaluation programme, project work, guidance activities and assessment of science clubs. The Department continued to render audio-visual and library services as usual.

A seven-day seminar on "Dynamism in Teaching" was organised by *the Extension Services Department, Warangal*. Twelve teachers attended the seminar and discussed ways of introducing dynamic methods of teaching so as to ensure the all round development of the pupil. The Honorary Director visited a number of schools during the month under report and gave necessary guidance to the staff of the schools. Six film-shows were arranged during the period. The Department also arranged a seven-day workshop on audio-visual education for twenty-seven teachers.

An eight-day workshop on audio-visual education on science was conducted by *the Extension Services Department, Kurnool*. Twenty-six participants prepared charts, models and film-strips for use in teaching certain difficult concepts in general science. The Department also arranged a seminar on teaching and evaluation in general mathematics for eighteen teachers from the lower forms in secondary schools of the town.

The Extension Services Department, Rajahmundry, conducted a two-day seminar on the problems of text-books in social studies. Seventeen teachers from local secondary schools attended the seminar. The participants considered in detail the various aspects of text-books in social studies. In particular, they discussed the syllabus in the subject and the selection of maps, pictures and charts for the text-

books. The Co-ordinator of the Department accompanied by the Science Lecturer of the Training College, conducted the assessment of three science clubs. The staff of the Municipal School for Girls at Kakinada were acquainted with the organisation of the library service of the Department. Four film shows were arranged during the month.

An evaluation workshop in social studies organised by *the Department of Extension Services, Osmania University, Hyderabad*, was attended by 19 teachers. The Department exhibited 13 films during the month and loaned 248 library books.

At a state-level evaluation workshop in general science arranged by *the Extension Services Department, Kolhapur*, the delegates discussed the techniques of evaluation and prepared test-items based on the syllabus of standard IX. The Department also organised a conference of thirty teachers of Marathi in secondary schools. School visits were made in connection with the try-out of test-material, which was adminiserted to nearly 900 pupils.

Thirty-eight headmasters attended a two-day workshop organised by *the Department of Extension Services, Poona*. During his school visits, the Co-ordinator not only discussed special problems but also assisted in administering the new test items prepared by the Evaluation Officer. The Department also conducted a number of film shows and loaned audio-visual material to several schools. An exhibition of audio-visual aids and library books of the Department was arranged in the Training College.

The Extension Services Department, Nagpur, arranged a State-level subject teachers' seminar lasting for 10 days and attended by 39 teachers. The local Secondary Teachers' Association organised a three-day conference of secondary school teachers of Ellichpur, when the Department of Extension Services was also invited to hold an educational seminar for the benefit of the participants. 111 teachers and headmasters participated in the seminar and discussed the problems and difficulties in teaching in different subjects.

Under the joint auspices of the Headmasters' Association, Nasik District and *the Department of Extension Services, Secondary Training College, Bombay*, a six-day course for teachers of English was organised at Nasik for forty teachers. The programme included talks, group discussions, demonstration and practice lessons. The Co-ordinator visited five schools to assess the work of science clubs. At an orientation workshop in mathematics for the teacher-trainees of the Secondary Training College, Bombay, the trainees listed the objectives of teaching the subject, discussed the idea of "behaviour changes" and prepared test-items.

SOUTHERN ZONE

Two state-level evaluation workshops in English and science were organised by *the Department of Extension Services, Perianaickenpalayam*, for

about twenty teachers. The Department also got up a Children's Arts Exhibition in which exhibits received from 164 schools were displayed.

Under the auspices of *the Department of Extension Services, St. Christopher's Training College, Madras,* Miss C. Johnson, Director of Library Services, United States Information Services, conducted a two-day seminar on Library Science. The object of the seminar was to help librarians to organise their libraries, to furnish them information on children's books and magazines and to train them in the display of books. The participants also learnt how to classify and catalogue books. The coloured films "Books for all" and "Greatest Treasure" were screened for the benefit of the participants of the seminar. The Co-ordinator visited ten multipurpose schools in the city during the month.

The Department of Extension Services, Annamalainagar, continued its weekly English Course under the guidance of Dr. G. S. Hutley. Besides drilling pronunciation and correct usage, some effective techniques of teaching English were also demonstrated. The Department also organised a five-day seminar on the teaching of science, when the participants worked out in detail three units on sound, acids and alkalis and leaves. The library services of the Department were maintained as usual.

The Co-ordinator of *the Department of Extension Services, Madurai,* visited three schools to evaluate the work done by their science clubs. Other school visits helped to discuss follow-up activities and the organisation of an exhibition to be held at the time of the 50th Madras State Educational Conference.

Under the auspices of *the Department of Extension Services, Mangalore,* a six-day State-level evaluation workshop in elective mathematics was organised for 19 teachers. The evaluation officer attached to the centre also conducted reorientation courses for the B.Ed. students of the two training colleges. The Department organised a science exhibition and an exhibition of audio-visual aids during the month under report. The Co-ordinator visited twelve high schools and arranged ten film shows during the period.

The Honorary Director and Co-ordinator of *the Department of Extension Services, Trivandrum,* visited eight schools to assess the impact of the work of Extension Services. An exhibition of T.C.M. equipment and books and exhibits from three local science clubs was organised during the month.

The Co-ordinator of *the Department of Extension Services, Kozhikode,* visited five schools to evaluate the work of science clubs. Film shows were arranged by the Department at five different places. Audio-visual equipment and books were also loaned to schools.

The Department of Extension Services, Trichur, organised State-level workshops in English and science. Thirty-six teachers participated in the two workshops and dealt with the major objectives of teaching the two subjects and the behaviours to be developed in children so as to achieve these objectives. They also prepared test-

material. At a workshop on audio-visual aids, the participants were trained in operating the film-strip and the motion-picture projectors and the tape-recorder. Clay modelling was also taken up and a number of puppets were made by the participants. Later, puppet shows relating to the teaching of languages, science and social studies were staged. The Department also arranged an exhibition of library books, charts, maps and audio-visual equipment and the articles made by student-members of the central science club.

An Education Week conducted by the Department of Extension Services, Belgaum, included a symposium on "Discipline in Secondary Schools", and school competitions in dramatics and other cultural activities. An exhibition of educational aids was also organised during the month. In collaboration with the British Council, the Department organised a ten-day refresher course in English for thirty-four teachers of English at Karwar. A special feature of the course which was directed by Mr. D.H. Spencer of the British Council was the four demonstration lessons given by Mr. Spencer. Another refresher course for three days was conducted for the benefit of forty teachers of Belgaum District by Mr. Spencer. The Co-ordinator visited four schools during the month under report,

PUBLICATIONS

The following publications were brought out by the Extension Services Departments during the month of January, 1960 :

	Name of the Department	*Name of the Publication*
1.	Government Training College, Jullundur.	Annual report of the Department for the year 1959-60.
2.	Government Post-Graduate Basic Training College, Chandigarh.	(1) Newsletter. (2) Annual Report.
3.	Central Institute of Education, Delhi.	(1) Newsletter No. 33—*October*, 1959. (2) Newsletter No. 34—November, 1959. (3) "Improvement of English Pronunciation"—A report of a Seminar held in October, 1959.
4.	Government Central Pedagogical Institute, Allahabad.	(1) Newsletter No. 10. (2) Some test-items in Social Studies.
5.	Isabella Thoburn College, Lucknow.	A report of the Library Service Course.
6.	Department of Education, Muslim University, Aligarh.	A brief Annual Report of the Department.
7.	Teachers' Training College, Turki.	A brief report of the talks given at the Conference of Headmasters and Educational Officers.

8.	Teachers' Training College, Bhagalpur.	Newsletter.
9.	R.N. Training College, Cuttack.	Newsletter.
10.	Government Training College, Hooghly.	Library Bulletin—No. 9.
11.	University Training College, Nagpur.	A report on the Seminar of Headmasters of Higher Secondary Schools of Vidarbha.
12.	St. Christopher's Training College, Vepery, Madras.	(1) A report on the Evaluation Workshop in Social Studies, Science and English. (2) Annual Report for 1959-60.
13.	Government Training College, Trichur, Kerala.	Publication No. 9—Newsletter from April to September, 1959.

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Zonal Conference of Extension Services Departments

NORTH-WESTERN ZONE

The Fifth Annual Conference of the Directors and Co-ordinators of the Extension Services Departments of the North-Western Zone (Punjab, Jammu & Kashmir and Rajasthan) was held on the 1st and 2nd of February, 1960, at the Government Training College, Jullundur. It was attended by the following Directors and Co-ordinators of eight out of the nine training colleges in the zone :—

1.	Government Training College, Jullundur.	Director and Co-ordinator.
2.	Central Institute of Education, Delhi.	Director and Co-ordinator.
3.	Jamia Millia Islamia, Jamia Nagar, New Delhi.	Director and Co-ordinator.
4.	Dev Samaj College for Women, Ferozepur City.	Director and Co-ordinator.
5.	State College of Education, Patiala.	Director and Co-ordinator.
6.	Government Teachers' Training College, Bikaner.	Director and Co-ordinator.
7.	Govindram Seksaria Teachers' College, Udaipur.	Director and Co-ordinator.
8.	Teachers' Training College, Srinagar.	Director.

Due to indisposition of the Honorary Director and the Co-ordinator, the Extension Services Department, Government Post-Graduate Basic Training College, Chandigarh, remained unrepresented Mrs. S. Doraiswami, Field Adviser, represented the Directorate at the Conference.

The annual reports of the different Extension Services Departments were presented to the Conference and were discussed and reviewed by the delegates. The following points emerged out of the discussion and were recommended for general guidance :

(1) Instead of having multi-pronged

problems in extension work we should concentrate upon one or two selected problems so that some tangible improvement could be effected in schools.

(2) Efforts should be made to organise courses for the school as a whole rather than courses in which only one or two teachers from each school participate. This would, of course, depend upon the nature and type of the course.

(3) As a 'follow-up' programme, the teachers who have once attended a particular course or workshop should be again called after the lapse of a reasonable time to attend a subsequent course on the same topic, so that they can relate the extent to which they have been able to translate into practice the ideas communicated to them earlier.

Recommendations

The Conference next considered the various administrative and other problems related to the working of the Extension Services Departments and made the following recommendations :

(1) In order that Extension Services Centres may carry on their useful activities, they should be made permanent. They should also continue to be under the financial control of the Central Government. The Central Institute of Education, Delhi, preferred to have its Extension Department made an integral part of the Institute and to have the department's budget incorporated in the regular budget of the Institute. This was suggested in view of the fact that the Central Institute of Education is centrally administered.

(2) Great difficulty is experienced because the grant for meeting T.A. and D.A. of non-local teachers was not being released by certain State Governments. It was, therefore, recommended that the Directorate may request the State Departments of Education to release the grants at the beginning of each financial year so as to enable the Extension Services Departments to continue their usual activities without a break.

(3) The State Departments of Education may also be requested to sanction separate funds for meeting the expenditure on T.A. and D.A. of non-local teachers who attend workshops and seminars which the State Departments specifically direct the Extension Services Centre to organise on their behalf.

(4) Difficulty is sometimes experienced in entertaining resource persons invited to give extension lectures at seminars or workshops. It is, therefore, recommended that the rules should provide that the expenses on resource personnel may take the form either of cash payment or expenditure on entertaining him provided that the latter does not exceed the admissible rate of payment as remuneration for such a lecture.

(5) In order to fill a few gaps in the audio-visual equipment supplied to different centres by the T.C.M., it is recommended that the following additional budgetary allocations be provided in respect of each centre.

(a) Purchase of gramophone records,

Rs. 500.00 non-recurring plus Rs, 100.00 recurring.

(b) Rs. 2000.00 non-recurring for the purchase of selected films in Hindi..

(c) An additional allocation of Rs. 500 under the head, "Maintenance of Transport Vehicle" raising the provision from Rs. 1500.00 to Rs. 2000.00 per annum.

(d) Rs. 500.00 per annum for the purchase of positive raw films for making film-strips.

(5) Regarding the question raised by the Directorate about the publication of the 'Newsletter' and 'High-lights of Activities' in *'Teacher Education'*, it is recommended that only the high-lights of activities should be published in *'Teacher Education'* and the publication of the 'News-letters' may be stopped,

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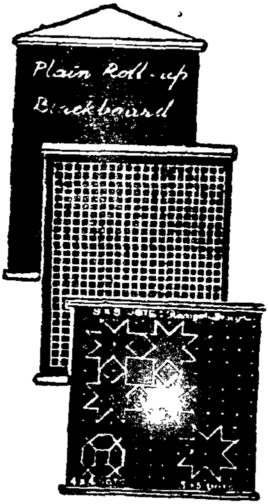

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CO-ORDINATORS' WORKSHOP

A ten-day workshop of the Co-ordinators of the Extension Services Departments in the country was held at the Central Institute of Education, Delhi, from the 29th of February to the 8th of March 1960, under the direction of Dr. E.A. Pires, Director of the Institute. The workshop was fortunate in having Dr. K.L. Shrimali, Union Minister for Education, to deliver the valedictory address and Shri R.K. Kapur, Deputy Educational Adviser to the Government of India, Ministry of Education, to inaugurate it. The workshop discussed many important problems concerning the working of the Extension Services Project, including action research, group dynamics, audio-visual aids services, the use of school broadcasts, the problems of multipurpose schools, follow-up work, organisation of science clubs and experimentation in schools. We publish below the inaugural address given by Shri R.K. Kapur, the valedictory address by Dr. K.L. Shrimali and the suggestions made at the workshop for follow-up and intensive work in participating schools.

—Editor

Inaugural address given by Shri R.K. Kapur, Deputy Educational Adviser, Ministry of Education

Shri Kapur began his inaugural address by emphasizing the importance of secondary education in the national system of education "Although every stage of education is important in its own way," he said, "the secondary stage is of special significance because a large body of the people who work in industrial and commercial concerns and in Government departments are educated only up to the high school. It is, therefore, clear that on the quality of secondary education depends largely the administrative, industrial and commercial efficiency of the country. But secondary education continues to be a very much neglected sector. While the claims of primary education make an impact on public imagination and the demands of University education are accepted as indispensable for maintaining leadership and national prestige, secondary education gets the squeeze from the bottom

and the top and suffers neglect even in the highest quarters."

"The main recommendations of the Secondary Education Commission were," Shri Kapur continued, "the conversion of high into higher secondary schools, the establishment of multipurpose schools, the implementation of examination reform, and the establishment of Extension Services Departments for providing in-service training to teachers.

"The progress made in the first field has not yet been very impressive so far. Out of about 13,500 high schools, not more than 3,000 would be converted into the higher secondary system by the end of the Second Five-Year Plan. The slow pace of conversion is partly due to lack of funds and partly to the shortage of trained personnel.

"As for multipurpose schools, a beginning has been made by establishing a few schools in all the States of the country, though conditions in most of them are far from satisfactory. They do not normally have more than two elective courses, and therefore, do not really deserve to be called *multipurpose* schools. Valuable experience has nevertheless been gained in this new scheme, and every effort is being made to improve the working of these schools.

"In the field of Examination reform, an Evaluation Unit has been established in the D.E.P.S.E. and our officers are doing good work in reorienting teachers to this new approach. They have recently held workshops for evaluation in different subjects and it is gratifying to find that a good deal of test material has been prepared.

"The fourth recommendation which flew out of the Secondary Education Commission has been implemented on a limited scale but has made the most satisfactory progress. The establishment of Extension Services Departments in 54 training colleges where a handful of Co-ordinators are working in a spirit of devotion has produced more lasting good than any comparable reform in secondary education. In spite of the fact that your work is impeded by several handicaps through personal contacts and by bringing new ideas and insight to teachers, you have succeeded in creating a climate for improvement in the work of the secondary schools.

"Although the Extension Services Centres have been in existence for some years, their significance is not fully understood by all. Your field of activity is placed in the heart of secondary education and this gives you a special advantage in studying its problems and in effecting necessary adjustments. I admit that this is not an easy function to discharge. You have to work hard and think ceaselessly about the problems which you come across and you have also to find solutions for them. I am, however, confident that if you are earnest and are prepared to accept the challenge of your work, you will not only find satisfactory answers but also make considered suggestions to the Directorate and the Ministry of Education for bringing about improvements in secondary education in the country.

"This workshop at which you have gathered provides you, in the first place.

with a chance to get together and know each other personally. It is also intended to give you an opportunity to discuss your problems in some important fields among yourselves and with the experts who are available at the headquarters. I extend to you a most warm welcome on behalf of the Ministry of Education and wish you a very pleasant and enjoyable stay in Delhi."

Suggestions for follow-up and intensive work with the participating schools

Since the Extension Services Departments were established about three years ago, a fair number of conferences, seminars and workshops have been held to make the teacher aware of the improvements that are necessary both in the organisation of schools and in class-room teaching. These meetings have also been fruitful in evolving new ideas and methods for effecting these improvements. The stage has now been reached when Extension Services Departments can, with advantage, devote more time and energy to follow-up work in schools. The urgency of such work was stressed by the sub-committee on In-service Training of Teachers, appointed by the All-India Council for Secondary Education. The sub-committee was of the opinion that Extension Services Departments might reduce if necessary, activities such as lectures and seminars in order to accelerate intensive follow-up work. The sub-committee also recommended that it should be insisted that participants at every conference, seminar, workshop or course should work out definite proposals to implement the various ideas and methods evolved at such meetings, and these proposals should be incorporated in the body of the reports so as to provide suitable guidance to teachers in schools.

It is needless to emphasize that for a successful implementation of the follow-up programme, the Co-ordinator of the Extension Services Department should secure the co-operation of headmasters and teachers of schools on the one hand and of the staff of the training college and the inspectorate on the other. They must be convinced of the usefulness and the practicability of the new ideas and plans. Many of the difficulties with which the Co-ordinator is now faced would be minimized if the various agencies concerned with school education, are convinced of the soundness of the new methods.

The Co-ordinators at the workshops held meetings to take stock of the work which was now being done at the different Centres and prepared a suggestive list of activities some of which might be undertaken as part of follow-up and intensive work. After several of the Co-ordinators had reported on the outstanding activities of this type undertaken at their respective centres and some had given detailed accounts of specific activities, the participants divided themselves into sub-groups and worked out in detail the list of such follow-up activities. The sub-groups met in an atmosphere of informality and cordiality following

the method of Group Dynamics explained by Dr. Corey. It is a matter of great satisfaction that they were able to indicate definite activities classified for the sake of convenience into six categories. These activities were later discussed and approved by all the participants of the workshop.

I. *Improved Methods of Teaching and Testing :*

1. Organising intensive workshops of teachers of individual schools in order to define in specific terms and in the terms of behaviour changes, the objectives of teaching each subject to the different classes ;

2. Organising workshops for dividing the syllabi of different subjects into small meaningful units and preparing a detailed monthly plan of work under the following heads :—

(a) laying down objectives of teaching each unit ;

(b) thinking out suitable learning situations ;

(c) preparing or collecting necessary teaching aids ; and

(d) preparing suitable test-items.

3. Devising suitable techniques for assessment of the year's work and for internal assessment ;

4. Paying intensive school visits lasting at least one whole day for formal and informal discussions with teachers, for giving demonstration lessons and for guiding the teachers in their work ;

5. Planning in detail and practising with the staff of a school, improved methods of teaching especially those involving active student participation such as group-activity and assignment methods ;

6. Organising some type of diagnostic and remedial teaching programme in some subjects based on studies previously carried out, for example, study of common errors in language subjects and their correction.

7. Organising school work on the basis of assignments and introducing supervised study ;

8. Developing individual cumulative record forms and techniques of filling out and using these records for purposes, like educational guidance, etc. ;

9. Organising study circles for subject teachers ;

10. Organising inter-school visits for teachers ;

11. Organising workshops for making teaching aids and making arrangements for lending them to different schools ; and

12. Encouraging school-level co-operative action research on problems actually faced by the teacher.

II. *Audio-Visual Education Service to schools :*

The Co-ordinators can help schools in connection with audio-visual education services in the following two ways :—

A. by arranging audio-visual aids programmes in schools ; and

B. by helping the teachers in making their own audio-visual aids.

A. *Arranging Audio-Visual Aids Programmes in Schools :*

This may include the following types of help :

(1) For Schools without audio-

visual equipment :

(a) Film shows to teachers as well as to pupils ;

(b) Opaque picture projections with episcope and picture cards ;

(c) Filmstrip shows to smaller groups or classes ;

(d) Tape-recorder and linguaphone records for language teaching.

(e) Supplying catalogue of charts and other audio-visual aids and circulating selected aids.

(2) For Schools having Audio-Visual Equipment

(a) Opaque picture projection with episcope and picture cards ;

(b) Demonstrating the use of the tape recorder and linguaphone records for language teaching.

(3) Lending audio-visual aids to schools requiring them for specific purposes.

(4) Arranging courses integrating the use of audio-visual aids with class room work.

B. *Helping Teachers in Making their own Audio-Visual Aids* :

(1) Arranging courses and workshops to give practical training in the preparation of improvised visual aids and handling of audio-visual equipment such as slides, diarama and flannelgraphs ;

(2) Encouraging the organisation of school and class museums ;

(3) Holding exhibitions of improvised audio-visual aids ;

(4) Training teachers in wet and dry preservation of biological specimens ;

(5) Helping teachers in the effective use of School Broadcasts through planning programmes for listening, discussion and demonstration;

(6) Organising broadcast programmes within the school.

III *Developing Syllabi :*

The Co-ordinators can help the teachers of individual schools to develop prescribed syllabi by providing significant learning-experiences and by relating to life the facts presented and the principles expounded.

(1) Relating the Units to life :

Both curricular and co-curricular projects may be incorporated with the units in order to relate them to life. Such projects should arise out of curricular activities as related to life and serve to enrich them.

(2) Dividing courses into meaningful units that are capable of initiating thought :

The year's course in each subject should be mapped out in meaningful units and for each unit objectives should be defined in terms of pupil behaviour. When a unit is completed simple diagnostic tests should be given and remedial teaching introduced where necessary.

(3) Integration and Correlation of Subjects :

Points of correlation between each unit and other subjects of the school curriculum as well as references to its historical development can be worked out. Sample units will be prepared in workshops, and tried out by teachers in a few schools.

IV. *Administrative and Organisa-*

tional Problems :

In order that the Co-ordinator may play an effective role in helping schools to solve administrative problems or plan them on a more efficient and organised basis, the Co-ordinators may :

1. encourage schools to build up a democratic atmosphere through activities such as :

   (a) subject teachers' committee : The teachers teaching the same subject should have the freedom to select textbooks, plan lesson-units, discuss the work done, organise tests in their own subjects etc.

   (b) self-government of pupils, such as school parliament, class councils, class panchayats a fair amount of responsibility being shared by the headmaster and teachers with the pupils ;

   (c) encouraging and guiding headmasters in planning and executing school work with the co-operation of teachers.

2. help the teachers create an atmosphere conducive to effective learning by pupils by

   (a) the organization of school and class libraries ;

   (b) the observation of subject days ; and

   (c) organisation of class-rooms and schools yards for effective instruction and thus create natural atmosphere for good learning.

3. help the headmaster to plan activities for talented and backward children.

4. help schools in organising Parent-Teacher Associations by introducing a number of activities for them.

5. encourage schools to plan better contacts with parents through a system of adopting children on an area or zonal basis.

V. *Intensive Work with Individual Schools :*

Selecting an intensive area for operation with not more than six schools or adoption of one or two institutions as experimental schools for trying out intensive work.

Initiating intensive Action Research programmes in experimental schools :

(1) Teaching

   (a) Learning and Teaching aids ;
   (b) Education Techniques ;
   (c) Unit plans for teaching ;
   (d) Devising evaluation tools.

(2) School Organisation

   (a) Leadership programmes ;
   (b) Self-Government in schools ;
   (c) Home Room activities ;
   (d) The School Beautiful Project ;
   (e) Health and Sanitation service.
   (f) Educational guidance (Education for the gifted & the retarded) :
   (g) Use of cumulative records for educational guidance.

VI. *School Library Service :*

For Schools :

The Co-ordinators can help in organising school library service in the following ways :—

1. Organisation of workshops for librarians and teacher-librarians, including training in modern methods

of library maintenance ;

2. Organisation of a library display project ;

3. (a) Organisation of class libraries and provision of a library period in the time-table ;

(b) Organisation of subject libraries.

4. Library News Bulletins.

(a) fresh arrivals ;

(b) summaries and reviews of books ; and

(c) book lists.

5. Training the students in broad principles of library maintenance, such as cataloguing and giving practice therein with a view to helping librarians and teacher-librarians ; student participation in library management ;

6. Book Bank Project ;

7. Organisation of study circles and reading clubs of students for simple reviews of books read by them. Appreciation of the best students in this respect ;

8. Building up manuscript libraries by getting pupils to write brochures or booklets on the story of their lives and on subjects from their physical and social environment.

For Teachers :

1. Teachers' reference libraries in staff rooms ;

2. Study circles of teachers in their schools and encouraging teachers to prepare summaries or reviews of books, which may be published by the Extension Services Departments for teachers' guidance ;

3. Setting up regional library centres with some of the Extension Services books ;

4. Promoting exchange of library books between schools, wherever possible.

Valedictory address by Dr. K.L. Shrimali, Union Minister for Education

Friends, I should at the outset like to thank the representatives of the Ford Foundation and the T.C.M., who have with generous grants and technical assistance helped to start the Extension Services Project in the field of secondary education in the country. It is due to their generosity and help that the entire programme has come into existence.

Usually it is the sensational news items that hit the headlines in the Press, but the silent work of thousands of teachers in our schools does not often receive the recognition that is due to it. Teachers, particularly in the rural areas, have to work under very discouraging conditions, often without any facilities of library, laboratory or equipment. Once a teacher goes to a distant school, he gets cut off from the latest developments in educational thought and practice. In the past, there was no attempt to maintain contact between teachers who had left the training college and the training institution. Most of the teachers completely lost touch with the training colleges and much of the training they had received was wasted for want of a suitable environment in which to implement the principles which they had imbibed. It thus happened that there was no integration between the

functions of the training college and the problems of the schools. Consequently we did not obtain adequate results either from the work that was being done in the training colleges or from the potential capacities of the teachers that left them.

The establishment of Extension Services in training colleges is a very significant and revolutionary step in the field of secondary education. The project has forged vital links between training colleges, schools and teachers, and is bound to have a far-reaching impact on the whole of our education system. It is just such a programme that will eventually help training colleges to take leadership among the schools which they serve, maintaining at the same time a continuous flow of up-to-date pedagogical information to and from the teachers in the field.

It must, however, be realised that a teacher's education does not end either with graduation or with formal pedagogical training. It has to continue throughout life through conscious and intelligent effort on the part of the individual. It is this consciousness that we have to create among our teachers and it is in this basic effort that the Extension Programme has played an impressive role. It is true that the depressing physical conditions under which most of our teachers have to work cause a feeling of frustration among them. They are not able to put into practice many of the theories which they had been taught in the training colleges and this engenders a sense of futility. It is, of course, not possible to transform all our educational institutions overnight, but it should be our effort to keep alive in the teachers that spirit of adventure and experimentation without which no educational programme can sustain itself. The main purpose of the Extension Services Programme is, to my thinking, to develop and encourage this spirit among the members of the teaching profession.

This in-service programme has effected a two-way improvement between the training college and the school. Teachers carry into the field the theories and principles they have learnt and go back to the training colleges for guidance and advice in solving their many difficulties in the application of these theories and principles. At the same time, the training colleges gain much insight into the real conditions that obtain in the secondary schools and the problems they have to deal with. Without such insight and experience, the theories that they teach are apt to be divorced from practice. For any effective programme of professional improvement, it is indispensable that there is continuous evaluation of theory in terms of practice and of practice in the light of theory.

It is for these reasons that I consider the Extension Services Project one of the most significant programmes undertaken by the Government of India. The programme may not be able to produce quick or startling results, but I have no doubt that it will ultimately contribute in a steady and lasting manner to the improvement of secondary education in the country. Second-

ary education which is the most important stage in the educational system is unfortunately also the weakest stage at present and requires special effort in all directions to strengthen it. It is my considered belief that training colleges with their Extension Services Departments will play no small part in the large-scale programme of re-construction of secondary education in which we are engaged at present.

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THE DEVELOPMENT OF READING ABILITY IN ENGLISH IN PUPILS OF NON-ENGLISH-MEDIUM SCHOOLS IN INDIA

L.A. Hill

Mr. L.A. Hill, Chief Education Officer of the British Council in India, explains in this article how reading ability in English can be developed in pupils even when it is not the medium of instruction in the school. He shows how necessary it is to avoid wrong techniques and wrong selection of matter, and gives concrete suggestions in procedure which should be very helpful to the practising teacher.

—Editor

Aims

Before starting any discussion on methods of teaching, I always ask "What are our aims ?" : we cannot work out effective methods of teaching something until we know what exactly we are trying to achieve. Our means will have to depend on our ends.

In the teaching of English one of our main aims is usually to train students to read English books rapidly and with comprehension. This skill of rapid reading for comprehension is the most useful of all for a student of a foreign language : the medical student can use it for reading medical books, the economics student for reading books about economics, the lover of literature for reading literature, the office worker for reading business letters, the army officer for reading orders and reports, and so on.

Reading Aloud

Such rapid reading for comprehension is therefore one of the main things we should try to develop. I would like to stress here that I am discussing *silent* reading, not reading *aloud* (the latter is often called *loud* reading in India, but this is not a use of the word *loud* that is accepted in English-speaking countries). Reading aloud is not a valuable skill for most people in the modern world, particularly in a foreign language. Those who want to become radio announcers, or those who have a blind foreign friend whom they would like to read to, need to be able to read aloud well ; but how many of our own students will fall into these categories ? Reading aloud well is, of course, a valuable skill for the teacher of English ; but it can most economically be taught in the Training

School to those who are going to become teachers.

Reading aloud in class is all too often merely a way of of passing 45 or so minutes with as little trouble as possible for the teacher ; it does not help the students. They are made to listen to English being badly pronounced, usually with bad stressing and intonation, by student after student ; and what is the result ? Naturally, it teaches the students bad pronunciation, stress and intonation or at least it confirms them in their own bad habits : we naturally learn whatever we hear most constantly ; and if the teacher forces us to listen to *bad* pronunciation, he is not merely wasting our time, but in fact actually *harming* us by giving us practice in listening to mistakes. It would be far better to have no reading aloud at all than this ; but if the teacher reads aloud, or plays a gramophone record or a tape-recording of a good speaker of English, the students can derive real benefit from this.

It is sometimes claimed that reading aloud is a way of teaching pronunciation, stress and rhythm ; but these are much better taught by oral work before the reading work—the silent reading work—begins. It is sometimes also claimed that reading aloud is a good way of *testing* pronunciation, etc. ; but this is also wrong : the average educated Englishman reads aloud badly, so reading aloud is not a valid test of speaking ability, even in *his* case. This is because reading aloud is a skill separate from the skill of speaking. You can test pronunciation, stress and intonation much more effectively by using purely oral tests. In fact, reading aloud is merely a test of the ability to read aloud.

Graded Reading Pieces

So when I put "development of reading ability" in the title to this article, I meant only "the ability to read silently and rapidly with comprehension".

Now, how can we train our students to do this ? One fundamental consideration is this : we cannot train them to read rapidly for comprehension by giving them practice in reading slowly with little or no comprehension : i.e. we cannot train them to do what we want them to do by forcing them to read material which is too difficult for them : that can only train them in the skill of deciphering puzzles, which is a quite different thing (and much less useful to most people). The practice of making students struggle through a difficult text with a dictionary and a grammar at their elbow grew out of classical studies—Greek, Latin, Sanskrit and so on. It is no longer necessary for *living* languages.

During a teacher-training course which I conducted last year, I was asked to demonstrate the teaching of a prose piece from the prescribed textbook to a class for whom this book was intended. The piece was 80 lines long ; but in those 80 lines I found, while I was preparing my lesson, 100 items (words, idioms and grammatical structures) which I would never expect students of that level to know. Quite obviously, such a book can only give

practice in deciphering. It cannot possibly give practice in rapid reading for comprehension.

One learns to read rapidly with comprehension by reading rapidly with comprehension : i.e. right from the beginning of reading, we must give our students pieces to read which are within their comprehension ; and we must gradually give them more and more difficult pieces as the weeks and months and years go by, until they reach a stage when they can read any ordinary, modern, non-technical English book *without* a dictionary, and a technical book *with* one. This can be done : it is done in most of the countries of the world, where English is a completely foreign language, which the students hear only for from 3 to 6 hours a week in the English class.

One often hears the excuse in India. "How can we expect our students to learn English nowadays, when English is taught only for six years, and only in the English class ? When I was a boy (or a girl) we started English at the age of six and studied it for 11 years, and all our other lessons were in English too".

Well, times have changed , but we are no worse off now than most countries in the world ; and it is still possible to achieve the results mentioned in my preceding paragraph if we go about things systematically and in accordance with common-sense : that s, if we avoid trying to make the students run before they can walk. We must resist the temptation to say : "Lamb's Essays are great literature, therefore we must prescribe them for our school-children". Great literature makes no impact on minds not yet able to understand it or to appreciate its beauties. We are doing a disservice to our own literary cause by forcing what seems to us great literature on those who cannot yet appreciate it, because the result is not only nil, but actually a minus quantity, since we shall only produce a distaste for great literature—and probably for the study of English as a whole—in our victims. *Festina lente* ("Hurry slowly") is a good motto, here as in many other contexts. We should not introduce anything which is not in the sort of English we would like our own students to use—good, simple, straight-forward English—until the B.A. Hons. course. Lamb, etc. are about as unsuitable as anything one could dig up.

How are we going to provide our students with a series of reading pieces which gradually become more and more difficult, but at each stage remain within their power to grasp ? Simply by having a graded syllabus which allows the teacher to teach the students the language bit by bit, in a systematic way. Such syllabuses exist : the All-India Council for Secondary Education has published a sample one They take the 2,000 to 2,500 most common words and the 250 or so most common grammatical structures in English—those which it is essential to know as a start—and arrange them in a graded order for teaching, so that the teacher can teach the easiest and most useful ones first, and the more difficult and not so common ones later. A student who has a good command of these

words and structures can read any ordinary non-technical work in contemporary English, with the occasional use of a dictionary. Later the medical student can add to this store of knowledge the technical terms of medicine, the economics student those of economics, the lover of literature poetical words and turns of phrase, and so on.

The Oral Approach

It is nowadays considered more economical and effective to teach new words and grammatical structures *orally* first—at least in the early stages of teaching a language—and then to introduce them into reading matter : this means that the reading piece attached to Lesson 21, for instance. will contain only words and structures which have been taught orally in Lessons 1 to 21. As a result, each reading piece will contain only words and structures that the student has already been taught (although later in the course, it is quite common to introduce a *few* new words in a reading piece, making sure that their meaning is clear from the context and that they recur sufficiently often in the piece for the students to have a chance to learn them).

Technique for Developing Reading Ability

Students are immensely encouraged when they find, very early in their studies, that they can easily understand what they read. It provides them with a powerful incentive to presevere with their studies. On the other hand, a continual, hopeless struggle with things which are far too difficult has a frustrating effect on students ; they get to hate English instead of to love it.

The technique I use for developing reading ability is this : after I have introduced (orally) the new words and structures required for the reading piece, and after I have drilled them orally with the students, I tell them to open their books and read the next piece (which, as I have mentioned above, contains only material which they already know from their oral work). My aims are to get the students to read (a) rapidly, and (b) with comprehension. To encourage speed, I tell the students to stand up as soon as they think they are ready to answer questions on the piece. This introduces an element of haste into the reading.

When most of the students have stood up, I get them to answer questions on the piece, to test their comprehension of it. It is not necessary to keep a record of the marks they obtain, unless one wants to : the fact that the students know they will have to answer questions is an incentive to them to try to understand what they read : i.e. the questions are less a testing device than an incentive to the students to do the reading properly.

The questions should be written up on the blackboard either before or after the students do the silent reading : if you put them up before, you ask the students to read the piece with a view to finding the answers to the questions; but, to discourage too superficial reading, you warn them that you will also ask one or two further questions, in addition to those on the board.

If you do not write the questions on the board before the reading, you tell the students that they should stand up when they feel ready to answer any questions you might ask on the piece.

The teacher can experiment with both these procedures, and perhaps change from one to the other from time to time to provide variety.

The questions asked can be either of the essay type or of the objective type: in the essay type, the students have to provide the answers themselves; in the objective type, they are given several alternative answers to the question, and have to mark the correct one.

It is important, in preparing questions, to make sure that they really *do* test comprehension and that they cannot merely be answered mechanically. For instance, if one of the sentences in the reading piece is "John Smith was rowing as fast as he could", and there is no other mention of John Smith in the piece, it would be wrong to have, as one of the questions, "What was John Smith doing?", because even if a student had no idea what the sentence in the reading piece meant or what the question meant, he could recognise the words "John Smith" and simply copy out the sentence containing them in the piece as his answer to the question.

The Importance of Interest

Reading pieces should interest the students for whom they are intended. All too often, pieces are chosen because some professor likes them, or because he thinks they teach a valuable moral lesson, or such some thing. If we want to encourage our students to form the reading habit, we must give them what *they* like, not what *we* like: later, when we have caught them with this bait, we can start leading them up our own favourite garden paths; but we shall ruin our chances—perhaps for ever—if we are impatient. You can take a horse to the water, but you can't make him drink; and you can force students to prepare Wordsworth's "Daffodils" for an examination, but you can't make them like it if they are not yet mature enough for it.

Reading pieces should be written by—or in consultation with—practising teachers who are in close touch with the children for whom they are being written. If these teachers say that a particular piece is not suited to the mental development and interests of the students concerned, my advice is: omit it, however much you may yourself like it.

In addition to collections of graded reading pieces for use in the class, each school should have as many supplementary readers, or "rapid readers", or whatever one likes to call them, as possible. There are plenty of graded readers of this kind available: Longmans and the Oxford University Press publish several series at different levels of difficulty. If students enjoy their class reading, they can easily be persuaded to borrow such supplementary readers from the class library and read them.

Summing Up

To sum up, I consider that reading

ability will develop only when students begin to say, "Hey, this reading business is fun ! I'm really good at it. I can understand everything quite easily *and* I like these stories !" A feeling of success is the average student's greatest incentive to further effort : and if our lessons cannot arouse genuine interest, they are indeed pitiful things which deserve to fail.

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A REQUEST

Subscribers for **'Teacher Education'** are once again reminded to renew their subscription for the year 1960 immediately to ensure the continuous supply of the Journal. —Editor

ENGLISH TEACHING CAMPAIGN IN MADRAS

F.L. Billows

Madras State made a decision to begin the teaching of English at the fifth standard from June 1960. This step called for a state-wide preparation of teachers to meet the demand adequately. In co-operation with the British Council a full scale scheme has been launched whereby a large body of teachers are reached directly and indirectly and trained in the necessary skills. Mr. F.L. Billows, Education Officer of the British Council, Madras, gives an interesting account of how the scheme works.

—Editor

When the Madras Government decided two years ago that the teaching of English should begin in the 5th standard—the last class of the elementary school—from June 1960, it was agreed that steps would have to be taken to ensure that the work was properly done. English had not been taught in the elementary schools for a considerable time and the teaching of beginners calls for more efficient methods and greater skills than the teaching of the later stages ; otherwise the learner may be discouraged from the start and given the impression that language learning is beyond him. At first it was thought that it might be enough to show the Deputy Inspectors how to conduct short courses for the new teachers of English and how to supervise their work during the first years of the new programme, but as most of the teachers had only passed S.S.L.C. and very few had had any training in language teaching this was soon seen to be inadequate. A radio campaign was also considered, but eventually ruled out on the grounds that it tended to bye-pass the teacher ; he would merely serve the instrument and the ready-made lesson ; there would be no scope for him to practise and increase his skill.

It was decided that a campaign was required which would reach the 22,000 teachers who would begin teaching English in the 5th Standard of the elementary school after June 1960. This was too many to reach directly, so we decided to reach them indirectly by training high school teachers to do the work. We hoped that their own teaching in the high schools would be improved by their having to revise their whole approach to teaching because they would have to catch and

hold the interest and attention of adults. We believed also that insight into the work of teaching beginners was necessary for them.

The scheme, as finally worked out and now adopted, combines the training of the teachers of beginners with a programme of co-operation and self-help for the high school teacher. The basis of the work lies in 3-week refresher courses (which we have chosen to call 'primary courses'), in each of which 50 experienced high school and middle school teachers are trained in new teaching methods and formed into teams for retraining the teachers who will teach English in the elementary schools. To cover the ground in a short time, these primary refresher courses will be run in 5 centres, Madras, Coimbatore, Madurai, Tiruchirapalli and Tirunelveli. The staff to run these courses has to be trained, however, as there are very few teachers available with any experience in this kind of work. The method adopted has been to start with a senior staff of 5 to run the first series of primary refresher courses for the Madras area and to organize follow-up work ; in doing this they have trained 10 assistants in the work of running refresher courses, over a 4-month period of 3 refresher courses and a month of follow-up work. One member of the senior staff and two of the staff trainees were taken from the work of running the primary refresher courses to organize and supervise the running of the "secondary courses", in which those trained in the primary courses pass on their knowledge, skill and their new attitudes to the teachers of beginners in the elementary schools. This method has made possible expansion to two centres at the end of the first 4-month phase, and is expected to provide enough trained staff for expansion to three more centres at the end of the second phase.

We speak of a 3-week training in primary courses for the high school and middle school teacher, but, of course, no one believes that a teacher can be retrained in 3 weeks. It would be difficult, however, to spare large numbers of teachers from the schools for longer than this, and if the courses were longer, the numbers trained would be too few to make any appreciable difference. Mr. C. Subramaniam, the Education Minister of Madras State, has from the beginning insisted that the campaign must extend its benefits as rapidly as possible to all the schools in the State, and not content itself with reaching a privileged minority, leaving large numbers of children to finish their education without any improvement in their teaching over the next 5 or 6 years. The 3-week primary courses are accordingly designed to give the teacher new hope and enthusiasm, to show him a wide variety of new methods and give him the opportunity of trying some of them. But the chief aim of the courses is to organize him for future work in showing the way to elementary school teachers. It is this work of training others which gives him the opportunity to feel his way slowly into the methods of teaching. During the three-week "Primary Courses", the high school

teacher is given training in group discussion and group teaching practice ; he is given language material for teaching, which he can practise afterwards with the elementary school teachers : similarly he is given work in phonetics and grammar, (1) to help the elementary school teachers whom he will be training, (2) to improve his own command of the language, and (3) to improve the quality of the teaching which he is doing in his own high school classes.

Soon after the end of the three-week primary course, the high school teacher is allotted to a team which is to undertake the retraining of elementary school teachers in secondary courses, under the direction of 3 members of the permanent staff. Continuing over a period of 4 or 5 months in evenings and at week-ends, to avoid disrupting the schools, these secondary courses exert a continuous gentle pressure on the high school teacher to think about his regular teaching and make use of new methods in his effort to gain the attention and respect of the elementary teachers. The elementary school teachers on their side get the attention and advice of more experienced teachers whose mastery of the language is much better, throughout the first few months of their efforts to begin the teaching of English. An important feature of the secondary courses is that the elementary teachers are organized into groups of six or seven with the object of getting them into the habit of looking critically and constructively at one another's teaching, pronunciation, and use of English. We hope that at the end of a secondary course, the habit of group discussion and co-operation will have become so fixed as to remain a permanent feature of school life, for the pupil as much as for the te cher.

One grave defect of refresher courses for teachers in the past has been that there has been no strong incentive for the teacher who has attended a course to make use of what he has learnt. Under the present scheme not only are the high school teachers immediatcly put to useful work in training teachers who badly need such help, but also the elementary teachers are shown how they can support one another and work together to improve their skill even after their secondary course has ended. The teacher is likely to be helped and stimulated at every point by the knowledge that he is part of a well-organized and purposeful movement. Teachers are being organized to help themselves but at the same time they are being assured of the interest and support of the Government.

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SECOND PHASE

On October 1, 1958, Metric weights were introduced in selected areas and regulated markets in all States and Union Territories with a two-year time-limit for complete change-over.

THIS TWO-YEAR PERIOD WILL END ON SEPTEMBER 30, 1960, AFTER WHICH USE OF METRIC WEIGHTS WILL BE COMPULSORY IN THESE AREAS.

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GROUP ACTIVITY METHODS IN THE TEACHING OF ENGLISH

S.J. Devasagayam

The Extension Services Department at the Meston Training College, Madras, began an intensive programme in August, 1957, for achieving two objectives, namely, to help teachers to increase their professional knowledge and competence, and to help schools to improve class room instruction. One of the aspects on which the Centre has concentrated its attention has been to improve the teaching of English by using group activity methods. The following article gives an account of the methods adopted and the results achieved in this effort during the two years. The article has been extracted from the report presented by Shri S. J. Devasagayam, the Co-ordinator at the Workshop of Co-ordinators held at Delhi from the 29th of February to the 9th of March, 1960.

—Editor

Standards in English in high schools have declined visibly during the past few years. A careful study of the replies which the Centre received to a questionnaire issued to the participating schools revealed that the fundamental factor of inadequate time and practice was the main cause for ineffective teaching of the language.

During an Action Research Workshop held in April, 1958, the Centre discussed this problem with one of the headmasters of a progressive school and came to the conclusion that by means of organising instructional procedures on group basis it might be possible to overcome the problem of inadequate time and the consequent insufficient practice that was so seriously affecting the teaching of English. Accordingly, a few educational experiments were initiated in June, 1958, by the Islamia High School, Pernambut, with the co-operation of the headmaster and a few enthusiastic teachers. With the active assistance of the Extension Department and by means of frequent faculty meetings, procedures and results were subjected to careful and critical analysis and out of this preliminary study emerged a set of fairly satisfactory procedures for teaching different types of English

lessons. Based on this experience, the school introduced in 1958 group activity methods in all the classes (including form VI) for the teaching of English as well as other non-language subjects.

The success which attended this experiment encouraged the Centre to launch a wider campaign in the district of North Arcot in June, 1959, for bringing about an improvement in the teaching of English by the group activity method. The aim was to introduce it in ten high schools in the district during 1959-60. In order to achieve this the Centre drew up a programme of intensive school visits.

In September, 1959, the headmasters and senior assistants of the schools included in the intensive school visit campaign met together to make a critical study of the group activity procedures employed by the teachers in the different classes The conclusion reached by this conference was so promising that the headmasters of twelve high schools agreed to introduce this method in their schools for the teaching of the language.

Formation of Study Groups

The pupils of the class selected for the method are divided into convenient study groups, generally of eight pupils each, based on the following broad criteria :

(a) As far as possible, pupils coming from the same neighbourhood or locality should be grouped together.

(b) Each group should have pupils of all levels of intelligence—bright, average and slow. In each group there should be at least one student who is above the average.

Each group elects its leader, the leadership moving in rotation among the members of the group.

While there is flexibility in the constitution of the group, frequent migration from one group to another is not encouraged.

Group leaders are given regular instructions and guidance by the teachers.

The group sits round in a circle while at work and this arrangement eliminates the need for much space or furniture.

Group Activity Procedures in the Teaching of English

The following is a brief description of the procedures which have been evolved by experimentation. However, we wish to make it clear that we do not consider these as the only possible procedures of group activity methods. During the follow-up visits to schools which have adopted these methods, we found that teachers had effected variations in the procedures according to their individual needs.

Under traditional methods, most pupils in the class get little opportunity to speak, read or write English. It can almost be said that their weakness in the language is largely due to the inadequate practice in the process of language-learning, perhaps because the time available for such practice is so limited. The group activity procedures evolved by us solve just this problem. They enable the teacher to

provide more practice for pupils in speaking, reading and writing English within the limited time available.

In teaching English as a foreign language, the following have to be kept in view :—

1. Patterns have to be fixed in the child's memory.

2. Children should write a great deal.

3. Fluency should normally precede accuracy.

The worth of the procedures developed by us should be evaluated on the basis of these considerations. These are illustrated below.

A Lesson on Detailed Text

Stage I. The Teacher Introduces the Selected Structures :

The structures indicated for the lesson in the Departmental Syllabus are introduced by the teacher without reference to the lesson to be taught, though these structures are found in the lesson. After sufficient oral drill in the usage of the new structure, the teacher gives substitution tables on the black board. The pupils go into groups and prepare sentences with the help of the substitution tables. Examples of sentences prepared by different groups are written on the black board.

Stage II. The Teacher Reads the Passage :

The teacher reads the lesson as clearly as possible. The passage contains the new structures just taught and therefore they become familiar. Proper attention is paid to the pronunciation of new and difficult words which are repeated more than once.

Stage III. Study of New and Difficult Words :

(a) The lesson is divided into as many parts as there are groups. Each group prepares a list of new and difficult words which occur in the assigned portion. The lists so prepared are discussed by the class as a whole and many of the familiar words are deleted and a final list of new words emerges. These words in the final list are written horizontally in as many columns as there are groups and then divided vertically. Each vertical column of new words is assigned to each group and they are asked to find the meaning suitable to the context with the help of the dictionary. Wherever necessary the teacher also helps and explains.

After the final list of new words is written on the black board, it is open to the teacher to explain the meaning of the words with reference to the context in which these words are used in the lesson.

(b) The pupils then go into groups and prepare sentences of their own using the new words. Often this task is made a part of the assignment which comes as the last stage.

Stage IV. Reading by Pupils in Groups :

Group work procedures enable a larger number of pupils to receive practice in reading aloud. Usually this follows reading by the teacher and language study. This is attempted in the following way :—

(a) The teacher asks one pupil in each group who is considered fairly good at reading, to read the passage

before the class—the teacher correcting wherever necessary.

(b) Then the pupils in the groups read one after another, helped and corrected by this pupil.

As the group reading proceeds, the teacher moves from group to group, alert to correct any mistake.

Stage V. Assignments :

The teacher then gives assignments to each group. These are prepared in advance and are written or typed on slips of paper. The assignments take the form of different types of exercises such as :

(a) Writing brief answers to given questions. Some of these questions should be so planned as to provide practice in the usage of new structures and words.

i) Change of tense
ii) Change of person
iii) Change of degrees of comparison
iv) Statements to be changed to questions
v) Change of voice
vi) Direct to indirect speech

The group leader reads the first question or exercise. One pupil suggests an answer, and others discuss, accept or modify it. The final choice is repeated by each pupil. (Repeating by each pupil is insisted in the lower forms). Then the leader writes it in his notebook.

When the assignment is completed by the group, the teacher corrects the note-book of the leader. The correction is done in the presence of all the members of the group, discussing with them the mistakes wherever necessary. Minor mistakes are just indicated by a mark.

The pupils then go back for group work and correct the mistakes indicated by the teacher. When the group fails to correct a mistake, these are discussed with the whole class and corrected by the teacher. The corrected answers are written down by all the members of the groups in their individual note-books. To avoid mistakes while so writing, the group leader supervises the work or sometimes notebooks are exchanged among the pupils.

In the next lesson period, assignments are exchanged among the groups. All assignments are done by all pupils.

The lesson unit for the day is so selected that these five stages are gone through in one period of forty-five minutes. The teacher also fixes the time limit for each stage. Not a minute is wasted and all the time the pupils are purposefully active and interested.

Study of the non-Detailed Reader

In the Lower Forms.

1. (a) The teacher tells the story orally.
   (b) He uses the key words which occur in the lesson in his oral narration and gives their meaning.
2. Teacher reads the lesson.
3. Groups read the lesson.
4. Short questions, already prepared by the teacher, and divided into as many parts as there are groups, are handed over to the groups written on slips of paper.

5. Groups prepare answers for the questions.

6. When all the groups are ready, the teacher calls on the first group to read the answers written by them. The teacher writes each answer on the black board. If there is any mistake in the sentence other pupils in the class are asked to correc the mistakes. The mistakes which the whole class is not able to correct are discussed, explained and corrected by the teacher. All the answers of all the groups are treated in the same way. The corrected answers written on the black board give the pupils the story in their own words.

7. All pupils write all questions and all answers in their fair note-books.

In the Upper Forms.

1. The pupils are asked to read the lesson before coming to the class.

2. In the class the teacher assigns one unit to one group. The entire lesson is divided into as many parts or units as there are groups.

3. The groups frame questions and the questions so framed by each group are written on the black board, discussed, corrected and modified where necessary and then finalised.

4. The groups prepare answers for the questions. The questions prepared by one group are answered by another.

5. The answers are again brought before the class and treated in the same way as the questions at the third stage.

6. All pupils write all questions and all answers in their fair note-books.

Compositions

Upper Forms.

(1) Precis writing or

(2) General essay or

(3) Essay on the text.

1. Each group prepares a list of the main points to be included in the essay. As this work proceeds, the teacher goes round from group to group pointing out where omissions or mistakes occur.

2. (a) The teacher takes the best outlines and uses them for developing a final outline on the black board. At this stage he discusses with th class as a whole some of the points where necessary.

(b) Sometimes the teacher goes to each group and finalises the outline for each group instead of developing a common outline on the black board. Then each group writes its own precis or essay.

3. The groups then write out the essay or precis with the help of the final outline on the black board. Each boy writes down only those sentences which the group as a whole approves. Sometimes the sentences approved by the group are written by the leader alone.

4. The teacher goes to each group and corrects the mistakes in one note-book in the presence of all the members of the group discussing mistakes where necessary. Each pupil then carries out the corrections in his own note-book with the help of the one corrected by the teacher. Then a fair copy is made.

5. The fair note-books are checked by the teacher,

Lower Forms.

1. Picture Composition.
2. Composition Based on Film-strips.

In the lower forms we are experimenting with picture compositions and compositions based on story filmstrips.

1. *Picture Composition :* We begin with oral composition in the shape of questions and answers based on large wall pictures. Key words are introduced and written on the black board. Then groups prepare the composition with or without a given list of questions. The leader writes the sentences contributed and approved by the members of the group. The teacher corrects the composition for each group in the presence of all the members of the group discussing mistakes whenever necessary. The corrected composition is fair copied by all the members of the group. The teacher checks the fair note-books.

2. *Composition based on film-strips :* The story film-strip is first projected. As each frame comes to the screen, the teacher narrates the story. Now the filmstrip is projected a second time and as each frame comes to the screen, the story is elicited from the pupils by questions. Pupils now work in groups and prepare an outline. When this work proceeds, the teacher moves from group to group and helps with suggestions and corrections. With the help of the best outlines given by the groups, the teacher prepares a final outline on the black board. The film-strip is projected a third time more rapidly. Then the pupils write the story with the help of the final outline on the black board, working in groups. The leader writes the sentences suggested and approved by the group. The teacher corrects one note-book for each group. Other pupils copy into their note books which are checked by the teacher.

In Forms I and II we use group activity procedures for spelling drill.

Group Leaders

The leaders of each group has to play a key role and the success of group work method depends very much on the way leaders discharge their responsibilities. The teacher meets the leaders frequently and discusses with them the part they have to play.

(1) The leader reads the questions in the assignment one by one and gives turns for each pupil in his group to give an answer or to suggest corrections for an answer.

(2) He sees that each pupil repeats the answer or sentence approved by the group.

(3) The ensures that every pupil writes the sentence approved by the group.

(4) He supervises when the members of the group carry out the corrections after the teacher's correction of one note book for the group.

(5) He conducts oral reading practice for his group giving turns for each pupil.

Merit of Group Activity Procedures

1. Under these procedures the pupils cease to be passive listeners and become active participants with an immediate goal to achieve,

2. Variety and activity replace the soul-killing monotony of talk. Class room work becomes purposeful and full of life both for the pupils and for the teacher.

3. The teacher becomes a friend and guide whose assistance and guidance are *sought* and not *imposed*. He talks less but the pupil learns more.

4. Pupils develop desirable study habits. The attitude of waiting helplessly for the teacher to do everything for them is replaced by initiative and co-operative endeavour.

5. There is scope for the pupils of higher levels of intelligence to display and develop their talents.

6. Problems of class room discipline and "inattention" get solved to a great extent.

7. This is a time-saving device and more pupil-work is turned out in less time.

8. As far as English is concerned, these procedures enable each pupil to have more practice in speaking, reading and writing the language in the limited time available.

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—Editor

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BOMBAY CALCUTTA MADRAS

THE STRUCTURAL APPROACH AND THE EARLY COURSES

Sadhana Guha

Since Indian Independence the status of English in our country has changed and this change calls for a new and realistic approach to the teaching of English. Recent investigations have established the importance of word order, stress, intonation etc., to convey meaning. It has also been possible to arrive at a fairly complete statement of the structural items that constitute the English language. A few states in India have already adopted a syllabus evolved by grading these structures. The author of this article who is a teacher in the Sakhawat Girls High School, Calcutta, writes of her experiences in her attempt to teach English using a structural syllabus. —Editor

Many will agree that it is far more difficult to teach beginners than it is to teach older children and that if the foundation be not well laid it will be a hard job both for the learner and teacher to proceed. This is more true in the case of teaching a foreign language, for it is the most complex of all the subjects in the curriculum. With regard to all subjects, the initial considerations are what to teach and how to teach. In the case of all other subjects it is quite possible to come to a general agreement regarding the syllabus and even regarding the method, but it is not so easy in the case of a foreign language. What may appear to be a single subject is really a group of associated yet distinct branches of study such as speech, reading, composition and grammar. In other words 'foreign language learning is essentially a skill or a series of skills, calling for the assimilation of a considerable amount of language matter for reproduction and adaptation without conscious effort.'

Yet, in spite of the complexity of procedures involved, foreign languages have been quite successfully taught by many good teachers all over the world and their experiences may give us valuable guidance.

The Structural Approach

In recent years it has been realized that the selection of patterns or structures in a language is as important as the selection of vocabulary in conducting courses in a foreign language.

It is perhaps as important to know how to join words to produce meaning as it is to know their individual meanings, and unless the learner becomes familiar with their patterns, he will not be able to use his vocabulary. Again, mere selection of patterns or structures is not adequate. The structures must be graded according to their grammatical difficulty and taught in a logical order.

Putting aside other suggestions made by experienced teachers, I would like to give my opinion based on personal experience regarding the use of such graded structures in teaching English.

The First Decision

Every method has its merits as well as its defects, but until and unless a teacher actually puts it into practice, it will not be possible for her to detect how far and with what success she can apply the method under the conditions in which she has to work. Having been taught through the direct method I have always been in favour of such an approach, and ever since I took up the teaching profession, I have more or less tried to keep to this method except where the syllabus or circumstances have compelled me to take recourse to other means. Naturally, when I attended a refresher course organized by the British Council four years ago, and heard much about the structural approach, I immediately made up my mind to talk about it to my headmistress and carry out an experiment in my school. The only syllabus that I could avail myself of at that time was the first year syllabus given to us by Mr. J. G. Bruton. Then there arose the problem of selecting a suitable text book. As there were hardly any to serve the purpose, Deepak Reader was selected.

Early Experiences

Soon I found myself in Class III where I was to see how the structural approach worked. Unfortunately my pupils were not exactly beginners for they had already been taught how to read and write in the kindergarten stage. But there were many who still faltered and wrote 'That is a Ram' or 'You are talking to our' or 'You was here.' Of course it was quite natural for little children of their age to make such mistakes, especially in a foreign language which they never used or heard again for the rest of the day. Besides, they had gone through many types of structures and new words in a text book where structures were not graded. The learning load had been too much for such young children and teaching could not have been done systematically from the structural point.

A reasonable amount of drilling and repetition of old work is not possible when there are many structures and new words to be taught in a lesson unit. This should not necessarily lead us to conclude that if enough of ear-training is given and students are made to speak, they will not make mistakes in writing or even in speaking. What is meant is that when a mistake occurs either while reading or speaking, quite a number of children spot

the mistake and correct it. Experience has shown that children between 6 + and 7 + should only be taught one or two structures in a lesson unit with the help of a limited number of words. The teacher must always try to measure the child's capacity for assimilation.

Work begins

Coming back to my work in Class III, let me mention here again, that as the students were not real beginners, I did not have to go through the initial steps of teaching them how to write the letters and how to recognize the sounds which they represent. But though they knew how to read and write a little I began with the structures from the beginning. In the early stages, work proceeded quickly as some of the structures had already been mastered, but things were not so easy when it came to dealing with prepositions, articles, pronouns like 'me', 'him', 'it', 'our', 'us', 'their', the plurals of nouns already learnt, and the past and the future tenses of the verbs they knew. These difficulties came up when they were still being taught the first 36 structures. By difficulty I do not mean that these parts of speech could not be taught, but that their correct usage had to be taught carefully. Later on, the use of the four tenses (the present continuous, the habitual present, the simple past and simple future), the various question forms, the use of mass nouns and the use of 'some', 'any', the other', 'the others' etc. had to be carefully dealt with. Much effort was made to make the lessons interesting by introducing a variety of situations. Stories from fables were re-written within the range of the structures and vocabulary which they had learnt : or they were told with the help of picture drawings. Students were made to speak as much as they could. Language games were used to enliven the learning. Easy poems and rhymes were introduced and the students enjoyed them. By the end of the year, in addition to short written exercises like composing sentences, inserting missing words etc., they were also taught to write eight to ten sentences on simple subjects like a friend, class-room, school, garden and our family.

It should not be presumed that because many preliminary difficulties had been overcome before they came to this class, both the teacher's and the learner's task was made easy. To a certain extent it was undoubtedly true, for, without that basic foundation I could not have reached the stage I arrived at by the end of the year. There were, however, other facts to be considered. It must be remembered that the structural syllabus was framed on the presumption that students would be learning the language in class VI (that is when the students are about 11 and have already acquired the language skills of the mother-tongue to some degree) ; but my students had begun earlier and moreover in the early stages, it had not been possible to introduce the structures in a systematic order. The result was that a good deal had to be unlearnt. Besides, with regard to certain structures (specially the tenses),

I felt that older children might have grasped much more quickly than they did (of course this has yet to be tried out by teachers). Yet, in spite of these difficulties, I found the students advancing fairly well on the whole. Every attempt was made not only to create a natural situation but also a suitable environment.

At present the same group of students are in Class VI and I am still teaching them. It will not be out of place here to mention that our headmistress believes that the language teacher should be allowed to teach a group of students for at least two years, if not more and she sees that it is done. Again, in order to bring about a coordination of the English courses and English teaching in the school, all the teachers have been requested to follow the structural approach and the "Deepak Readers" are being used throughout. In addition, the subject teachers meet from time to time to discuss individual teaching problems and other matters closely connected with the teaching of the language. It may also be mentioned here that the system of Examination too has undergone a corresponding change. In the lower classes children are expected to pass in their oral and spelling test.

Back with the Beginners

The brief account that follows gives an idea of what is being done in the class room to teach real beginners through the new approach. The information has been gathered from the teachers teaching in the kindergarten. It has, however, to be made clear in this context that the existing methods have not been altogether done away with to give place to the new. Previously every English teacher had followed a direct method of her own. All that she has to consider in her new approach or in the presentation of her lesson in class now is that she must lay equal, if not more stress on structures as on vocabulary.

Speech Training

In the earliest stages nothing abstract is introduced. It is not difficult to associate names with many objects or pictures inside and outside the class room. Again with each group of names many names of qualities are demonstrable and so can many actions and pronouns be illustrated. At this stage use of the mother-tongue is hardly necessary for there is little possibility of learning an English word as the equivalent of one in the mother-tongue. Ear-training holds an important place, for this is a necessary pre-requisite to actual speech. Fluent and accurate reproduction of the teacher's model speech also makes good initial practice and this cannot be expected if the pupils are called upon to speak immediately after hearing the language used for the first time. Hence in the first part of the lesson they should be helped to listen to the teacher's speech and concentrate on the meaning, while their ears become attuned to the sounds. In the second part of the lesson they are given training in sound reproduction. The pupil's first speech efforts take the form of conventional responses to simple questions. Advocates of the

structural approach would naturally oppose the use of questions and suggest the use of gestures. In practice, teachers feel that this point does not matter much, for, gestures always accompany questions and besides, the teacher does not have to keep repeating the questions all the time. The teaching of the question forms can also follow soon and will be facilitated by this early ear-training. Another point that we have observed is that when children have surmounted the initial difficulties, they should be allowed to speak. Hence the drilling practice must be done at a quick pace, and at times simultaneous answers must be accepted. Children should be encouraged to speak in English out-of-class as well. For home-work, guardians could be asked to do oral work for about fifteen minutes followed by transcription work. Senior students of the school could also help or the students themselves could help one another. This develops a spirit of co-operation as well.

Writing

Writing begins with training in the formation of letters. Script has undoubted advantages in the early stages, especially when the students are so young. For initial practice a number of consonants are selected and combined with a vowel to form phonic words. The pupils thus combine reading with writing and a double purpose is served. Transcription work is carried on throughout the first year concurrently with the introduction of other skills, so that gradually the students grow accustomed to converting print into their own cursive writing.

Reading

In actual practice, speech, writing and reading follow one another almost simultaneously. Children first learn to read sentences as a whole from flash cards, substitution scrolls, charts or from sentences written on the black-board by the teacher. After a few lessons they learn to recognize sentences as a whole and then to recognize the individual words in these sentences. Sometimes writing lessons follow reading lessons in the same period. Gradually more and more reading material is presented. At present, for want of a proper text book, most of the reading material has to be prepared by the teacher herself. They are written on the black-board and left there for sometime. Children can also help the teacher to make reading charts to be used in their class. Later on, when they have learned how to write fairly well, the reading material prepared by the teacher can be transcribed in their respective exercise books, thus serving a double purpose.

Structures

Experience has shown that in addition to acquiring the above three, skills, children in the kindergarten can assimilate about 25 to 30 structures with the help of a fairly good vocabulary of about 200 words before they come to class III. At present we have decided that so long as English is retained in these lower classes, we shall follow this systematic and connected course until we complete the basic English structures.

Structural Approach and Pupil Interest

All that has been stated so far might naturally lead one to conclude that there is hardly anything to be said to the contrary regarding the structural approach. There is certainly the danger of over-indulgence in repetitive methods and excessive control. Classes might become monotonous and uninteresting. Pupils vary in their mental habits and cannot be expected to respond uniformly to the same stimulus. The teacher must therefore be alert to the danger of her drill methods degenerating into a mechanical and oppressive routine. She has to see that she avoids sameness in her lessons. In all class room activities, particularly in the early stages, we should help them to acquire knowledge in such a way that they would feel no more strain than they would when playing a game. The nearer the situations can be made to approach the child's natural life, the greater will be the impression that facts make on her memory. Good pictures could be made use of where such situations cannot be created. Although it is physically not possible to let the pupils move about in the class room as much as in their homes, the teacher should still encourage regulated movements in the class room, or if necessary, out-doors. Nursery rhymes are a valuable aid to language teaching to beginners, for, not only do they promote interest but they also aid fluency and correct articulation.

Monotony can also be avoided by a flexible and varied time-table, and by planning the week's work according to the requirements of the progress which the class makes. Twenty to twenty-five minutes of intensive oral drill followed by fifteen minutes of writing or reading practice with practice in phonics is certainly more useful for beginners than using the whole of each period for each individual item.

Rigidity of Style

Another defect in following a strictly graded syllabus is that children cannot easily acquire a free language style although they do learn how to write simple and correct English. Teachers who have never learnt the language under such controlled conditions find it rather artificial and feel that the vocabulary taught will not ultimately serve the learner's purpose in college, where for sometime to some the medium of instruction in many subjects will still remain English. This remains to be observed. The final achievement of the student depends not only on the teaching methods but also on the careful guidance that the learner receives as he grows older. If heads of schools do not take an active interest in the whole problem and are just satisfied if teachers of the language go through the readers, and do not make students read a single extra book, and if the system of examination remains the same, the standard of achievement will definitely be worse than what it is at present.

Reading habit which is so essential to language learning, should be promoted not only through supplementary readers but by extensive library reading from very early stages. Many books are being written and stories

retold for children learning English as a second language are available at low cost. In Class III when my students had completed the first reader I *could not* find suitable books in the library for them. The students then suggested that they would contribute a few annas towards the purchase of ten copies each of two good books which they could share and read in class. This was done and it was a happy beginning. In the early stages I had to select the books for them and guide them carefully. At present such graded books are used by nearly all the students up to class VIII and the subject teacher sees whether they are taking an interest in them or not. In the higher classes they are allowed to choose more difficult books, which may not necessarily be graded.

Content and Environment

Some contend that the structural approach concentrates on the drill of structures and the building of vocabulary, to the exclusion of everything else. There is nothing to rouse children's interest for there is not much scope for including in the study the life and culture of the people whose language we are to study. We do agree that this is true to a *certain* extent. The need of proper environment and content cannot altogether be overlooked though in the earliest stages linguistic material can quite successfully be presented in the immediate environment of the child. No lack of interest has been detected among our beginners. But as we proceed with our work we do make every possible attempt to create a proper environment. Text book writers can help us much in the matter since text books are still in the making. Lessons may deal with English life and culture. Pictures may depict an English countryside or an English home and of James and Elizabeth and not only of Ram or Gopal. The *General Service* Wall pictures by E.V. Gatenby and C.E. Eckersley are beautifully got up and create an English *atmosphere* and setting. Similar pictures could be collected by the students and used for picture composition or hung on the wall of the class room and replaced by others from time to time. Library book reading, if encouraged, will fill up whatever is left out in class. Students should be led to read English newspapers. The 'Playtime' page in the Sunday Statesman 'Tik and Tok' makes interesting reading. Several other devices could be employed with profit.

Grammar

Lastly, let us not be under the wrong impression that grammar has no place in the structural approach. The approach accepts the *grammatical basis* of the language. In teaching the structures the secrets of the English syntax automatically reveal themselves. Indirectly the students learn useful grammar especially if grammatical rules and terms are introduced to them after the inductive process has taken place. Dr. V.R. Umarji rightly says that if the drilling in the structures makes the usage firm, drilling of the structures with their rules makes the usage firmer.

THE CONCEPT OF EVALUATION IN EDUCATION

Sam Durairaj

One of the recommendations of the Secondary Education Commission related to the reform of examination. The Government of India, with expert technical advice from Dr. B.S. Bloom of the University of Chicago and in consultation with leading Indian educationists, drew up a phased programme of education reform. This programme was unanimously accepted by the Boards of Secondary Education in India in September 1958. As a first step in the reform, a Central Examination Unit with 13 officers was established in the Directorate of Extension Programmes at the Centre. State Governments and Boards of Secondary Education are expected to set up their own Evaluation Units during the year 1960-61.

It is generally agreed that the present examination tests only one objective, namely, the acquisition of information. Even more significant in education as well as in life are the objectives of applying the knowledge acquired to the solution of problems in life, or of developing certain skills, attitudes, interests and values. With the programme for reform of the present examinations, it is envisaged that additional objectives and appropriate evaluation devices will gradually be brought within the ambit of examinations, until eventually, the attainment of all the educational objectives of learning the various school subjects is evaluated. The officers of the Central Unit are engaged in developing a pool of suitable test materials with the help of practising teachers. This material will be of use to Boards of Secondary Education and teachers and administrators for assessment purposes. Better evaluation techniques will necessarily presuppose better instruction. A programme of examination reform implies a reform of the curriculum and the learning and technical methods. This article is an attempt to put across the concept of evaluation to teachers and examiners. Shri S. Durairaj is Evaluation Officer in the Directorate.

—Editor

The Challenge of the Present

Many people allege that all is not well with our education. They are quick to point out its defects. Successive Commissions on education have pointed out that

* students and teachers lose sight of the real goals of teaching and

learning a subject and tend to substitute the *attainment of high* marks at the public examination as *the goal*,

* teachers think more of *teaching a subject* than the child,
* teachers teach children whole essays *by heart* for reproduction in the examination,
* teachers think of examinations as coming only *at the time periodic* reports are due,
* too much importance in testing is given to *one objective* of teaching the subject, namely, acquisition of information, while other equally important ones go almost untested,
* undue weight is attached to the ability of pupil to memorise relatively unimportant details *learned for the examination only*,
* the questions set at the examinations are *not* really *comprehensive* enough to be valid,
* the *judgement* of different teachers or examiners of a student's performance is widely *divergent*,
* pupil progress is reported in *terms of percentage* of marks he scores in a subject, which is just cold statistics and does not tell us how good his progress is,
* teachers are not able to identify *the strength and weakness* of their own teaching from the way pupil performance is reported at present.

What is our Expectation for the Children in our Schools ?

We expect schools to help children in

* building up their personality *and character so that they can* take their rightful place in the nation,
* assimilating scientific knowledge and skills that will help them vocationally and socially,
* doing critical and creative thinking,
* strengthening their ability to converse with and write to others and thus share their knowledge, thoughts and feelings,
* developing healthy attitudes towards problems and people, contributing to effective community life,
* motivating them to act according to worthy ideals in the service of the community and the nation,
* stimulating them into cultivating worthwhile interests in life to make life quite meaningful.

ALL THESE WE EXPECT THE TEACHER TO DO WHILE HE TEACHES TRIGONOMETRY OR WOODWORK OR POETRY OR ANY OTHER SUBJECT. IF THAT IS EDUCATION, THEN THE TEACHER HAS TO RECOGNISE THAT

* education is a process that brings about desirable changes in the child,
* each subject in the curriculum has to contribute towards these changes,
* these changes will form a continuous process that commences when a pupil enters school and goes on till he leaves it and even long after that,
* these changes would imply the

fulfilment of our educational objectives.

Focus of Objectives

The teacher has to base his approach to his work on the kind of behaviour he wishes to result from his teaching. The teacher cannot assume that he has done a good job when he has gone over a lesson in the class. Even at the planning stage he has to ask himself, "What behaviour changes can I bring about through this lesson ?" Such changes constitute his educational goals or objectives.

What are Educational Objectives ?

An objective is

* a point or an end-view of something towards which action is directed,
* a planned-for-change sought through any activity,
* what we set out to do.

OUR EDUCATIONAL OBJECTIVES THEREFORE ARE THE CHANGES WE WISH TO PRODUCE IN THE CHILD. THE CHANGES THAT MUST TAKE PLACE THROUGH EDUCATION ARE REPRESENTED IN

* the knowledge children acquire,
* the skills and abilities children attain,
* the interests children develop,
* the attitudes children manifest.

ONE WHO HAS GONE THROUGH A PROCESS OF EDUCATION HAS TO CHANGE IN ALL THESE DIRECTIONS. THEY GIVE US AN END-VIEW OF THE PUPIL AS HE SHOULD BE, WHEN HE COMPLETES HIS EDUCATION IN THE SCHOOL.

If education imparted is effective, then the student will 'behave' differently from the way he did before he came to the school. The pupil knows something of which he was ignorant before. He understands some things which he did not understand before. He can solve problems he could not solve before. He can do some things which he could not do before. He revises his attitudes desirably towards things—THESE ARE THE OBJECTIVES OF HIS EDUCATION. EDUCATION IS THUS THE PROCESS OF BRINGING ABOUT CHANGES IN THE BEHAVIOUR OF THE PUPIL IN

* what pupil knows,
* how he thinks,
* how he feels,
* how he does.

Broad Educational Objectives and Specific Class Room Objectives

Broad goals indicate the most important aspects of human development. These should be the concern of all schools. While there are class room objectives unique to each course and subject, these will have to be so planned that they are consistent with the broad goals of education. Each teacher from the lowest to the highest class helps children to change and grow. Therefore each is responsible for the total attainment of the broad objectives of education. The specific class-room objectives have to be at the level of pupils in a particular class and adapted to the class room situation and formulated so as to be concrete and

tangible at that level. These objectives must involve points of information, the skill, and attitudes to be developed and interests that could be created through the particular topic or subject taken up for work in the class room.

'To enable a pupil to develop skill in finding topics in reference books, or

"To help a pupil to know how to dig a .compost pit in a village", ARE SPECIFIC CLASS ROOM OBJECTIVES UNDER THE BROAD GOALS.

CLASS ROOM OBJECTIVES THUS RELATE TO AND CONTRIBUTE TO THE TOTAL EDUCATIONAL PROCESS. BROAD OBJECTIVES ARE INDIRECT, WHILE CLASS ROOM OBJECTIVES ARE DIRECT, SPECIFIC AND FUNCTIONAL.

Why Must We State Class Room Objectives ?

A statement of objectives

* serves as a basis for the choice of class room procedures that should provide for suitable experiences to the children,
* serves as a guide in seeking evidence to determine the extent to which the class room work has accomplished what it set out to do.

Formulating an Objective

Stating an objective clearly is the first step in eduaction. It is the key to teaching. Teachers have to decide what changes they want to bring about in pupils taking a particular subject. It is important to formulate it correctly.

THIS IS THE RIGHT WAY—"To enable students to understand the terms, concepts and principles involved in trigonometry."

NOT THIS—"To help children acquire broad interests."

BUT THIS—"To help children acquire broad interests in reading fiction."

NO DOUBT THE FIRST STATEMENT STRESSES CHANGE IN THE PUPIL. BUT IT DOES NOT INDICATE THE SPECIFIC AREA IN WHICH CHANGE IS EXPECTED.

Hence an objective must

* be formulated in terms of change in the pupil,
* specify the content or area in which this change is expected to come about.

Defining an Objective

The statement of an objective does not automatically ensure successful learning. To some it may be clear enough while to others it may not be so. The objective certainly tells us what changes we purpose to bring about but it will be clearer still when we isolate the critical aspects of the particular change which we are talking about.

Here is an example of an educational objective.

Objective :—"To develop in children a sense of civic responsibility". This objective acquires concreteness, clarity and meaning when we get answers to the following questions :—

* What is it that a person who has a sense of civic responsibility does ?

* what is it that a person who has a sense of civic responsibility does not do ?

* what kinds of behaviour distinguish one who has a sense of civic responsibility from one who has no sense of civic responsibility ?

When this objective is thus defined, a sense of civic responsibility in a person will mean that he

* understands the social structure,

* is sensitive to disparities in society,

* acts to correct unsatisfactory tendencies in society,

* respects the law,

* accepts his duties,

* takes pride in his country,

* holds honest differences of opinion with others,

* is willing to give and take in an argument with others,

* has regard for national property,

* conserves national resources,

* does not waste national wealth.

THUS AN OBJECTIVE BECOMES TANGIBLE AND CAPABLE OF ATTAINMENT WHEN IT IS DEFINED IN TERMS OF PUPIL BEHAVIOUR.

The foregoing is an illustration of defining or clarifying an objective to make it more tangible. Its emphasis, it may be seen, is mainly on the behavioural aspect.

As stated earlier, a clearly formulated objective has two dimensions. It has to deal both with the behaviours as well as the content area in which the behaviours operate.

The following chart illustrates some of the behaviours involved in the study of an unit on "Community Projects" in a social studies course. It may be noted that these behaviours are sought to be developed in relation to the study of the unit.

WHEN CLASS ROOM OBJECTIVES ARE FORMULATED THUS IN TWO DIMENSIONS, IT IS CLEAR THAT ANY COURSE AIMS AT MORE THAN SIMPLY ACQUIRING INFORMATION. FURTHER, THE TEACHER GETS A SET OF SPECIFICATIONS USEFUL IN DETERMINING THE KIND OF EXPERIENCES THAT OUGHT TO BE PROVIDED IN THE CLASS ROOM FOR THE CHILDREN. THE CHART IS MERELY AN ILLUSTRATION TO MAKE AN OBJECTIVE MORE MEANINGFUL IN TERMS OF CONTENT.

Behaviour / Content	Knowledge.	Skills.	Attitudes	Interests
Topics. Community Life— Deveolpment Projects.	Pupil gains knowledge of :— organisation of a rural community; organisation of National Extension Service Blocks; functions of various developmental officers; various projects in a block. pupil understands the concept of .— backwardness, planning, co-operation, group action, group living, self effort, standard of living.	Pupil develops skill in : – interviewing people collecting data, locating knowledge, reading graphs and tables	Pupil appreciates :— the need for planned change in the economy of the community; the role of people themselves in improving their condition ; the dignity of labour	Pupil develops interest in organising a simple improvement project in their school community.

Learning Experiences

So far, consideration was given to the *ends* or goals of education. We have to consider now the *means* to attain these goals.

LEARNING OCCURS WHEN PUPIL HAS AN EXPERIENCE, THAT IS, WHEN HE REACTS TO THE SITUATION IN WHICH HE FINDS HIMSELF. HENCE LEARNING EXPERIENCES ARE THE MEANS TO ATTAIN EDUCATIONAL GOALS.

A learing experience is *not* synonymous with

* content of intruction,
* what the teacher does.

Children learn by thinking, feeling and doing. Learning results by the active reaction of the pupil to the stimulus situation which the teacher creates in the class. A pupil learns what he does. He is an active participant in what goes on in the classes. Essentially learning will be determined by the actions of the student himself.

How then Can the Teacher Help ?

When the teacher desires to bring

about change in a particular behaviour, he

* must make sure what situations will bring about those reactions which contribute to the desired change,
* must set up such a situation or a series of such situations in the class room which stimulate the desired reaction.

THE TEACHER'S JOB IS ONE OF SELECTING AND SETTING UP THE KINDS OF EXPERIENCES LIKELY TO LEAD TO THE ATTAINMENT OF ANY GIVEN EDUCATIONAL OBJECTIVE.

Check-List for Use in Selecting Learning Experiences

Learning experiences will differ from objective to objective. However, certain general principles may be borne in mind when the teacher determines the learning situation for the attainment of any given objective. The following check-list will be useful in the selection of such experiences :

* Are they directly related to goals ?
* Are they meaningful and satisfying to the learners ?
* Are they appropriate to the maturity of the learners ?

THE TEACHER MUST ALSO REMEMBER THAT

* a variety of learning experiences for the attainment of a single objective is possible and desirable,
* a learning experience organised to attain a single objective can result in several other desirable educational outcomes as well.

The traditional organisation of class work is a series of lessons related to a topic. Since learning experiences are not the same as subject content, they have to be built around the needs and interests of the pupils. In other words, subject matter has to be oriented in terms of the changes we wish to bring about in the learners.

THE TEACHER HAS TO DETERMINE CLEARLY THE PURPOSES OF A SELECTED UNIT OF STUDY, CHOOSE EXPERIENCES DESIGNED TO ACHIEVE THOSE PURPOSES AND IMPLEMENT THEM IN MEANINGFUL SEQUENCE.

Changes in a pupil's way of thinking, developing concepts, attitudes and interests have to be brought about gradually. No single experience will result in the change. Many experiences, one reinforcing another, will have to be provided. They may also have to be repeated in increasing complexity or levels, in meaningful sequence extended over a period of time. These experiences should be organised in such sequences that they assist children to establish clearer understanding, a higher level of skills and better attitudes. Some may be for the whole class, others for different groups and a few may be for the individual. The teacher has to make use of materials and resources within and outside the school to make these experiences meaningful to the students. Therefore, teachers will have to plan in advance. A cumulative effect of such experiences will evoke the desired change of behaviour with reference to a specific objective.

The following example illustrates the variety of learning experiences that can be cumulatively used at several levels and in more than one subject, to attain the chosen objective. It also shows how the experience also results in several other educational outcomes.

Objective :—TO BE ABLE TO DISTINGUISH PROPAGANDA FROM TRUTH

Possible Learning Experiences	*Other Educational Outcomes*
1. Pupils analyse content in news headlines, editorials, stories, advertisement etc.	1. Skill in listening and in oral and written communication.
2. Pupils study the editorials of different newspapers on the same theme and recognise the political leaning of each.	2. Skill in critical, independent thinking.
3. Pupils study propaganda devices in advertisements.	3. An attitude of open-mindedness.
4. Pupils role-play a sales-talk or electioneering.	4. An interest in journalism.
5. Pupils listen to news broadcasts and comments from Stations in different countries.	
6. Pupils pick out the fallacies in a speech in newspapers.	
7. Pupils prepare and make a speech using a few propaganda techniques.	
8. Pupils give a demonstration of correct conversation in contrast to gossip.	
9. Pupils write letters to the editor expressing their opinion on a controversial issue.	
10. Pupils write up advertisements for school magazine.	
11. Pupils develop a check-list for judging any material in terms of truth and propaganda.	
12. Pupils display on the bulletin board, specimens of straight news and propagandist news, good and bad advertising, propaganda devices with suitable illustrations etc.	

Learning Requires Continuous Evaluation

The fundamental test of sound education is its effect on the pupils. An educational programme may be based on an elaborate statement of objectives and involve an enthusiastic staff. However, unless desirable changes occur in pupils, the programme cannot be called successful.

Learning experiences are designed to bring about pre-planned changes in children. As learning takes place, teachers have to make frequent checks to find out the extent or the degree to which changes occur.

Again effectiveness of a learning experience can be appraised only in terms of the growth and change taking place in pupils as a result of such experiences.

THUS EVALUATION IS THE PROCESS OF DETERMINING

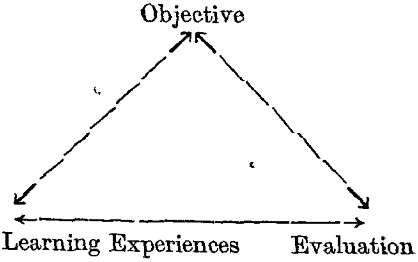
* the extent to which an objective is being attained,
* the effectiveness of the learning experiences provided in the class room,
* how well the goals of education have been accomplished.

Evaluation is *not* an extension of the usual written examination and marks in a subject

nor a means of judging the competence of individual teachers.

It should be noted that there is an inter-relatedness between objective (ends), learning experiences (means) and evaluation (evidence). Objectives remain central to both learning experience and evaluation. Evaluation comes in at the planning stage when bojectives are identified. Learning experiences are also planned in terms of objectives. At every point of learning, evaluation is an attempt to discover the extent of the effectiveness of the learning situation in evoking the desired changes in students.

This inter-relatedness between objective, learning experience and evaluation may be symbolically represented as in the following diagram.



One cannot pass judgement on students by just testing them at the end of a course of instruction. The change occurs over a period of time and therefore no single appraisal can tell us completely of the change. It is necessary to determine the status of a student at the starting point. Then at periodical intervals evaluations have to be made and changes identified in comparison with his position at the starting point.

In evaluation

* ONE HAS TO KNOW WHERE STUDENTS WERE AT THE BEGINNING IF WE ARE TO DETERMINE IF AND WHAT CHANGES ARE OCCURRING.
* ONE HAS TO OBTAIN A RECORD OF THE CHANGES

IN PUPILS BY USING APPROPRIATE METHODS OF APPRAISAL.

* ONE HAS TO JUDGE HOW GOOD THE CHANGES ARE IN THE LIGHT OF THE EVIDENCE OBTAINED.

Evaluation Devices

A good evaluation device or tool or method

* is one which can secure valid *evidence* of the desired change of behaviour

It is *not* synonymous with paper and pencil tests.

One objective is different from another. Each objective implies several behavioural changes. It is obvious therefore that no one single yardstick can suitably record the different types of changes. Each behaviour may need a different kind of device. Therefore we may have to

* use as many different devices as possible to seek and record evidence of change,
* ensure that each device we use is the most suitable one for securing evidence on a particular change.

The Selection of the Device

There is a large number of devices which a teacher can use to measure the progress of a pupil towards an objective. Different devices are used for different purposes. Therefore, the choice of any particular tool will be determined by

* the teaching objective,
* the kind of evidence based on that objective.

Variety of Evaluation Devices

There are many ways of gathering evidence on changes taking place in our pupils. Some of the devices are :—

(i) *Paper and pencil tests* : These tests, commonly in use in schools may be either of the essay type or of the objective type. Paper and pencil tests are useful in getting evidence on attainment of knowlege, on ability to analyse a problem critically or to recall and organise a relatively large amount of material. Paper and pencil tests may again be standardised tests or teacher-made ones. Teacher-made tests have an advantage over standardised tests because they can be constructed to measure outcomes directly related to class room specific objectives and particular class situations.

(ii) *Observations* : Observation provides evidence on children's level of emotional and intellectual maturity and also of social adjustment. This device is also useful in appraising growth in habits and manipulative skills. Careful observation and recording of evidence is invaluable in making judgement about pupils.

(iii) *Interviews* : In interviews with students, it is possible for the teacher to secure evidence concerning the growth of interests, change in attitudes etc.

(iv) *Questionnaires* : Questionnaires can be used frequently to secure information from pupils. Pupil is asked to react to a series of questions to collect evidence about growth of interests and attitudes.

Check-list : This is a variation of the above in which statements and

questions are very specific and incorporate a checking feature.

(v) *Pupil-products* : The actual products made by children provide another useful way of getting evidence of behaviour. The paintings of a student can give evidence of pupil's skill and interest in painting.

(vi) *Records* : Diaries of pupils, anecdotal and cumulative records maintained by teachers form another category of evaluation devices. Childrens' diaries throw much light on their appreciation, interests and attitudes and their personal and social problems. An anecdotal record is the teacher's description of significant pupil behaviour in an incident or critical situation. Evidence on pupil's attitude to others and other aspects of personality can be obtained from anecdotal records. The cumulative record is another evaluation device which assists the teacher to discover the growth of students in different directions. Even a library record of a pupil can indicate his reading interests.

Rating Procedures :

Along with many of the aforesaid devices, rating procedures will have to be used to evaluate situations or characteristics that can be present in varying degrees. They could be used both to evaluate one specific performance of a student by rating his behaviour as it progressed and to sum up many casual observations of behaviour of a student over a period of time.

IN USING A VARIETY OF EVALUATION TECHNIQUES, THE TEACHER MUST REMEMBER THAT

* the choice of the tool depends on the type of evidence sought,
* informal methods of evaluation are needed to supplement the evidence gained through formal paper-pencil tests,
* the information secured through informal devices are as important as that obtained by the use of formal written tests.

Evaluation Procedure

Step I : *Select the educational objective* which is to be evaluated.

II : *Define this objective* more specifically in terms of pupil behaviour implied in the objective. At the same time these behaviours must be related to the subject matter covered. This is best secured by using the two dimensional chart which indicates the number of items testing attainment of different behaviours of any objective for a given content area.

III : *Identify situation* which will provide evidence on the attainment or non-attainment of the behaviour relating to any objective. Children have to be brought into a controlled situation in which they can manifest the behaviour we seek. The situations we use must be capable of making the behaviour and the presence or absence of it can be observed by the teacher.

For example, if we are looking for evidence of student's ability to read with speed, then we will have to use that situation which places children in an activity where speed and reading are involved.

IV. *Examine and choose* tests or other devices that will directly or indirectly give evidence on the selected behaviour. If ready-made instruments or tests are not available, other ways of collecting evidence will have to be studied and devices developed.

V. *Construct the evaluation devices* : In constructing any evaluation device teacher has to ask himself

* With this device what do I want to evaluate in terms of objectives of teaching ?
* Does the device really provide evidence on what I want to find out ?
* Can *two different persons using* the same device in a similar situation arrive at the same result ?
* Is the device easy to use ?

VI. *Apply the device and record the evidence* : When any evaluation device is applied in a test situation on a pupil, it is necessary to get a record of the student's behaviour. In a written test, the pupil furnishes his own record in his written responses. In situations involving observation, it may mean a detailed recording by the teacher of the reactions of the pupil. There may be other test situations when the teacher uses a checklist by which he checks off particular types of evidence among a number of possible ones.

VII. *Interpret the evidence recorded* : When evidence rega ding pupil's behaviour has been recorded, there must be a careful analysis of it to pass judgement on how good the change in pupil has been.. The appraisal must naturally be in terms of the objective.

A single score or letter grade summary of achievement of pupil conveys very little information about the pupil and therefore provides little basis for further action or interpretation. Imagine that Ram scores 57 in English. *What does that score* mean ? Nothing at all unless we could also have some basis for compariso . This score of 57 obtained by Ram will *become more meaningful* when we secure additional information on the following :—

* What was the highest score possible in the test ?
* What were the highest and lowest scores made by students in the class ?
* What was the average score of the class ?
* What are the capabilities of Ram ?
* Has he achieved to the best of his ability ?

It may also be useful to compare

the set of results of an initial performance with one or more results of subsequent performance. This will throw light on the nature and rate of a change.

When standardised tests are used, the teachers can compare pupil's performance against some established norm or some relative standard of desirable progress.

Again, it would be useful to summarise results in a way which describes more fully the degree of attainment of each objective. The results must be stated such that strengths and weaknesses in the pupil could be diagnosed.

OF WHAT USE IS EVALUATION ?

A programme of evaluation does not end with the summarisation of results. It must lead directly to the improvement of instruction.

1. *Evaluation leads to improvement of instruction.*

There are many educational objectives aimed at by the school. In evaluation, attainment of each objective is indicated by comparable descriptive terms revealing change, strengths and weaknesses. The identification of strength may indicate which class procedures have succeeded and need to be continued; that of weakness may stimulate a study of possible causes for it and modification of ineffective class room practices. Again there is replanning of work, use of new methods and aids and a re-evaluation so that teaching becomes a way of *action research* on teaching-learning situation.

2. *Evaluation helps to clarify objectives.*

Evaluation is based on objectives. It has no basis or meaning unless it is related to clearly stated educational objectives. For a teacher therefore who is given just a syllabus comprising a series of topics for instruction, the evaluation procedure is a means of *clarifying his objectives* in teaching his subject. A well conceived educational programme is the natural concomitant.

3. *Evaluation promotes better learning.*

Pupils in school are powerfully affected by the examination methods adopted. Today they waste all their energy on memorisation of facts because only mere knowledge objective is being tested. Their study habits are conditioned by the examination methods. When they know that different objectives of education will be evaluated through different devices and that this type of evaluation is a continuous process, they will not concentrate their major attention to any one objective but get ready to face the evaluation of attainments in several objectives.

4. *Evaluation provides the basis for guidance.*

Evaluation helps to provide a good deal of information about the individual student. Particular individual weaknesses that call for remedial teaching can be identified through evaluation. Further a school guidance programme can be built round the information about pupils and their needs.

5. *Evaluation leads to curriculum changes.*

Objectives form the core of evaluation. Educational objectives themselves

are determined by the needs of the learner, the demands of society and the psychology of learning. Since society is not static but undergoes change all the time, since conditions in the world now-a-days change very rapidly owing to the vast strides in science and since research in education brings to light new theories, educators have to ask themselves quite frequently.

* Does our educational programme keep pace with the changing conditions in the world ?
* Can some area of content be dropped?
* Should there be greater emphasis on certain areas of the content than heretofore?
* Should the curriculum include new courses?
* Should the sequence of topics be altered to fit in with the latest findings of educational research?

Answers to these may lead to constant revision of the curriculum wherever necessary.

HOW CAN TEACHERS CO-OPERATE IN THIS PROGRAMME?

The teacher is the key person in this reform not merely because the class-room teachers contribute to the development of the test pool but because the reform of examination is only a tool in our scheme of improvement of instruction and curriculum His experience at an Evaluation Workshop clarifies his thinking on the entire educational process, beginning with objectives for his teaching. This gives purposes and directions to his plans and work.

You as teacher can co-operate in this programme by

* demanding to know more about the scheme of examination reform ;
* willingly participating in workshops when invited ;
* sharing your experiences at the workshop with your colleagues at school and stimulating an interest in the scheme in your school through conferences and discussions ;
* trying out in your classes some of the techniques in teaching and testing suggested at the workshops ;
* helping to make a beginning with the process of evaluation in your own class and school at the internal examination ;
* reporting to the Examination Unit your successes or failures with the evaluation procedure in your school :
* assisting in the creation of a suitable sectional library on Evaluation in your school ;
* reading articles on evaluation that appear frequently in educational journals and contributing to them articles concerning your experiences with evaluation procedures.

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WHEN WE EVALUATE EDUCATION

- we do it in terms of objectives for pupils
- we seek evidence of desirable changes in pupils
- we record and analyse the evidence of change
- we use the findings to improve their education

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STATEMENT AND DECLARATION

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Editorial

In pre-independence days, education as every other aspect of national life, was moulded in the pattern set by a foreign power according to what it considered best for itself and incidentally for the nation over which it ruled. Neither in terms of quantity nor of quality did our teachers have much say in altering or amending the system. Administration was run on a widespread faith in the omniscient wisdom of the ruling authority.

Faith has its own merits, and if it is an antidote to adventure and creative exploration, it at least induces a sense of comfortable security and protects life from gnawing doubts and crippling hesitations. A limited educational system produced limited results, but within those limitations it gave to everybody who was engaged in it—teachers as well as administrators—a sense of confidence which came pursuing unambiguous objectives. ith the coming of independence, this has to change and ity has to give place to a ical examination of our educaal values and assumptions. Along th the ferment in other walks of life, in the field of education also, the past decade has witnessed a deep desire to bring the benefits of democracy to the largest possible number and to improve the quality of national leadership by enriching the content of instruction. To speak of secondary education alone, the Mudaliar Commission made far-reaching recommendations which have left no aspect of our high school organisation untouched. To introduce these reforms is a tremendous task, not only because of the great changes they envisage, but also because, in the light of what has been said above, they cannot just be imposed in an authoritarian manner. They have to be discovered by practising teachers as not only desirable but also logically inescapable. This can be done through the democratic process of discussion where those who are to be the beneficiaries of the reforms sit together as the architects thereof, and in the manner of constitution makers give unto themselves the charter of reorganisation.

Such democratic reform in practice means that thousands of teachers of secondary schools have to be brought into the arena to pool their wisdom and publicize their experiences. They have to take few things for granted and accept nothing which does not stand the test of a searching examination. They have first to determine the goals and objectives of education, both to preserve the enduring values of their cultural tradition and to foster new attitudes which characterize the progressive nations. In the light of these goals they have to define the content of education and determine the techniques that would best achieve the desired results.

In order to effect this participation of teachers in building education, we have during the past five years launched extensive programmes of in-service training. These programmes

consist of seminars, workshops and conferences of varying duration and bring together teachers, headmasters and educational administrators to discuss in a free and democratic environment common educational problems. During these discussions we have touched upon subjects like curriculum change, methodology, text-books and the importance of orientating teachers. It is of course not suggested that the discussions have led to profound conclusions or that solutions have been found to some of our most difficult educational problems. It is, however, modestly claimed that because of this give and take of ideas, our teachers have been made to *think* and to realize that like courageous and self-reliant individuals it will be for them alone to find answers to their difficulties. This discovery of their implicit responsibility and the decision to measure up to it is an incalculably greater gain than any easy and externally suggested solution of the problems.

In the articles included in this issue, writers have discussed the role of these seminars, the way they should be organised, the problems that are usually encountered in their working and the suggestions that would improve their technique. Orthodox opinion lays down certain conditions for the different types of in-service programmes. In our country we have not been adhering too faithfully to these definitions because we are still in an experimental age. In fact, we even employ the terms "seminars" and "workshops" in a loose fashion. It is quite possible, as has been indicated by contributors, that several aspects of seminar organisation have to be improved in our country. We have to work out ways of making the groups more homogeneous, of limiting the areas of discussion, of pinpointing issues, of evaluating results and, above all, of following recommendations to ensure that they are not lost in the desert of inaction. All this must be done if we have to develop greater faith in the contribution that the teachers have to make in building up quality education. Our experience so far has shown that while one teacher is not necessarily as good as another, he should not on that account be excluded from educational forums, partly because he may have some unsuspected contribution to make and partly because his own improvement cannot be brought about without such participation. If what we have said above about the importance of democratic methods in education is correct, then all teachers, good and bad alike, have to be given a chance to look at their profession in a new light, and to accept the discipline of their jobs as cheerfully accepted self-discipline. It is, therefore, the duty of the State educational agencies to work out better and improved methods of organising seminars and other in-service programmes so that we may in the not distant future achieve a system of education where professional efficiency and qualitative improvement grow in parallel strength.

The Composite Reporter

Of all the persons who come to seek our advice, perhaps the one who is most difficult to deal with is the disgrunted idealist. An idealist by definition is an individual who fixes his sight on the stars and is oblivious of the ditch that opens before his feet. He is so concerned with setting right the evils of the world that he has no time to consult the doctor about his son's measles. He makes himself sick because others do not heed his advice and feels that the mills of God would stop grinding if he did not lend them a hand. He attracts to himself piles of work which are but remotely his concern and slaves himself to death in a profusion of self-imposed activity. He must participate in all "good causes" and there is no demand you cannot make on his time and attention in the name of self-abnegation. The hardships endured by his family because of his total preoccupation elsewhere is a price he thinks they must pay for his functioning as the standard-bearer of God. In short he believes that the world of personal gain is well lost if he can tire himself out in pushing Creation's rather stuck-in-the-mud wheels.

Such a person would appear to be quixotic if not indeed completely ridiculous were it not for the fact that some of the finest things in the world have been achieved by such dedicated individuals and in the field of education particularly their number is a legion. A disgrunted idealist might therefore appear at first sight to be a contradiction in terms because an idealist is sustained by faith and it is only when that gets dissipated that he becomes disgruntled. To lose faith means that considerations of profit and prestige which were ignored earlier suddenly make themselves felt and a wounded ego unsuspectedly rises up to battle against forces that threaten its security. An idealist also is a human being after all, and it is not surprising for him to feel hurt if he finds that the foundations on which he had built the superstructure of his personality are slipping away.

Such a one came to our office the other day and narrated his story as follows :—

"I have worked as a teacher for the last thirty years in a school which, well—which we shall keep nameless for the present. I have taught Geography to my students and I have tried to be of the utmost help to them outside the class-room. It has been my pride to have known the parents of all my

pupils because I have visited their homes as part of my educational responsibility. You will be astonished to find how confidently the students open up to you if you have known them in their homes. I have—you might say—given them both my knowledge and my affection. Also, well, I do not know if I should mention it,—why should one claim merit for what have been acts of unforced love ?—but perhaps to complete the picture it may be stated that I always gave financial help to the indigent and the needy. My students have held me in great affection and veneration ; indeed they have maintained a link with the school in after-years only because of me. Although the school begins at 10 A.M., I am usually there two hours earlier to coach the weak students and I stay there till late in the evening to do the sundry jobs which the headmaster entrusts to my care. Indeed it might please you to know that I have been nick-named as BARE CHACHA or the GREAT UNCLE of the school".

This could be a proud distinction and we complimented the visitor on the pivotal position he had achieved in the school. We, however, wondered how he was able to devote so much time every day for the school's work and enquired if he was married and had a family.

"No, Sir," replied our visitor. "I realized early in life that one could not serve two mistresses at the same time, —a woman and a school. I chose the latter and am therefore free from domestic encumbrances. The be-all and end-all of my existence, as they say, is the school."

We were impressed by his devotion which had been sublimated through an unusual act of self-denial and could not understand what troubles this worthy man had run into. We therefore encouraged him to continue his story.

"Sir, "he said, "in our school, as elsewhere, we have a scout master. This person drills the boys and organizes holiday camps and also helps the local authorities during fairs and exhibitions. He is undoubtedly able in his own way and he has also a flair for dramatics and personal publicity. He is in charge of nearly all social functions in our school and on such occasions he ingratiates himself with the important people in the city. Because of his personal popularity he is also able to collect donations for the school, not all of which, it is said, go into the school's account. In short, this gentleman has made himself quite indispensable to the school. Recently the headmaster and the school management recommended him for a National Award, which after judicious running around he has just secured.... Now, Sir, this is the question I ask : who is a better teacher, this gentleman or I ? I have worked myself thin in the service of my students and I have shunned publicity. I have even helped them with what money I had,....and I am poor. I have not been able to build a house for myself as the scout master has. I have been given lip-praise by everybody in the school but when it comes to public recognition I am left completely behind...."

There was a lump in the visitor's

throat and his eyes had grown misty. He could not go on further and we realized that he nursed a great grievance. He felt like one who had been suddenly jilted by a lady whose love he had counted upon for years. There is nothing more galling than a hurt of this kind and yet it was clear to us that he was smarting because of a wounded ego and because his vanity, lurking unsuspectingly in the depths of his consciousness, had been badly mauled. His ideal of service contained a flaw of which he was not aware and which we were determined to expose even though it might cause him some further pain.

Bursquely, therefore, we said, "Service is of various kinds. In fact it has been remarked that those also serve who merely stand and wait, though you might not readily concede it. You say that you served the school selflessly and gave your time and attention and even money ungrudgingly. You went so far as to say that you remained a teacher because of the school. I believe you must have carried on this work for a lifetime only because it gave you some deep satisfaction. And yet the moment you are passed over in the matter of a public award, you almost feel that your existence has been in vain. You thought you carried the globe upon your shoulders..."

"No, Sir," interrupted the visitor who had been listening to us uncomprehendingly in the excess of his own misery, "no, Sir, you are quite wrong there. I never carried the globe to my class ; I only carried an atlas."

"Never mind. Atlas was another gentleman who suffered from a nightmare. He thought he carried the heavens upon his shoulders. !"

"I beg your pardon, Sir, I do not know what you mean. 'Which Atlas are you referring to ? I do not know any person who is called by that name."

We felt thoroughly abashed about our incursion into Greek mythology which had completely baffled our poor visitor. We began again, this time on a more sympathetic note.

"Sir, we appreciate the laceration of your feelings. The situation is not uncommon in the world of education or elsewhere. We ourselves cannot pretend never to have undergone a similar experience. Nevertheless, there is an obvious fallacy in your way of thinking which we would like you to realize. When you chose to remain a celibate in the great tradition of the hermit-teachers of the past you surely did not expect a title at the end of your career ! You selected work which was to be its own reward , at the end of the day's allotted task, well and conscientously performed, you found,—what people so rarely find these days—your own complete satisfaction. You chose a circle of values which carried its own validity. These virtues did not have to be underlined by extraneous approval for their motivating power. They were not of course the only types of value one could pursue ; there were others, useful perhaps in their own way, somewhat florid and marketable, represented by persons like the scout master. Having pursued a particular line throughout your life you now wish

to be crowned by rewards which are the terminal point for a different kind of endeavour. I am not suggesting that your work should not be considered of a superior nature. I am not even saying that in your case public recognition has no meaning or significance. You see, Sir, to evaluate values is an extremely difficult task and not even all educators are capable of making the necessary discrimination. In fact one of the major and not always recognized tasks of education is to educate the educators."

"That's it, Sir. You have said it", remarked our visitor while rising to make his bow,—"to educate our educators is what needs to be done, and this was what all my life unfortunately I had never thought of doing. Thank you so much for giving me a new insight into my job."

* * *

Now that the examination season is upon us again, newspapers carry almost everyday stories of tragic waste of young lives where frustrated hope leads to thoughtless self-annihilation. The enormous load of human misery represented by examination failures is made further poignant by the spate of suicides in which inexperienced youth finds the only solution out of a grim difficulty. Sometimes, however, vengeance is not wreaked upon the human body which could not rise up to the occasion or upon the body of invigilators who are found deficient in the art of convenient winking or upon the band of examiners whose memories are so weak that they have forgotten they themselves were students a short while ago, but upon textbooks which do not yield their secrets easily or upon the Olympian Gods who preside disinterestedly over the agitated field of academic education. In this context we quote below a news item which appeared in one of the papers recently :—

"A matriculation candidate at the . . . . Centre having fared badly in the mathematics paper took a queer vengeance. It is reported that after returning home he broke the image of Goddess Saraswati whom he had worshipped a few months back and thereafter attempted to burn down the textbooks. Some members of the family however rushed to him and prevented the bonfire of textbooks. This is a new method adopted by an examinee to compensate for poor performance in examination".

While we appreciate the financial acumen of the parents in saving the textbooks, we deplore their lack of religious devotion in failing to protect the Goddess from student mishandling. We thought that this kind of treatment was reserved only for the senior professors of our more ancint Universities. Any way, the parents might have been wiser than we believe for they might have regarded the textbooks as being more truly symbolic of the Goddess than a mere image of clay. Be that as it may, now that the sympathies of the Immortals have been enlisted in the wholly earthy business of Examination Reform, we hope transcendental assistance will be readit available in the removal of such roadily-blocks as may be encountered from time to time.

EXTENSION SERVICES NEWSLETTER

NORTH WESTERN ZONE

Under the auspices of *the Department of Extension Services, Chandigarh,* a six-day state-level workshop on evaluation in elective mathematics was conducted at the centre and was attended by nine teachers. The participants prepared a number of learning experiences and test items. The Department also organised a fifteen-day refresher course for forty science teachers of high and higher secondary schools, when nineteen lectures were given on different aspects of the newly introduced syllabus for higher secondary schools covering all the additions to the syllabus. Twenty-three teachers of English discussed measures to improve English spelling. The meeting of art teachers held at Ambala discussed the implications of the recently introduced courses. The Co-ordinator visited four schools during the month and discussed various problems with their staff. The Department also organised two extension lectures on 'Examinations' and the 'Teaching of Poetry'.

The Co-ordinator of *the Extension Services Department, Patiala,* visited the schools at Bhawnigarh and Gharachon to discuss educational problems with their teachers.

Two lectures on the relationship between teaching and testing and the psychology of motivation were arranged by *the Department of Extension Services, Udaipur.* A six-day state-level workshop on evaluation in social studies was attended by fifteen teachers. The Co-ordinator visited four schools during the month in connection with the workshop in social studies and experimental projects.

The Department of Extension Services, Central Institute of Education, Delhi, organised a seminar on Action Research. Dr. S.M. Corey, a Visiting Professor from Columbia University, conducted the seminar which was attended by thirty heads of associated schools in the city. A follow-up meeting was also convened later in the month. The research study circle discussed aspects of leadership training. At a meeting of New Delhi Teachers' Study Circle, Professor J.M. Ure gave a demonstration lesson on the teaching of English to beginners. The Teachers' Study Circle held at the Central Institute of Education, organised a symposium on Contemporary Education in India and abroad. During her school visits, the Co-ordinator discussed the teaching of English and the school beautiful project with the teachers.

NORTHERN ZONE

The Department of Extension Services, Aligarh, conducted a four-day

follow-up workshop under the guidance of the Honorary Director of the Centre. The workshop was attended by twenty-three headmasters and principals of secondary schools and intermediate colleges of Assam, Delhi, Madhya Pradesh, Tripura, Uttar Pradesh and West Bengal. The participants divided themselves into groups to consider co-curriculum activities, examinations and cumulative records, self-government in school, and library and audio-visual aids. The practical course on the use of electricity in daily life was continued during the month at the Electrical Engineering Laboratory of the University.

The Co-ordinator of *the Department of Extension Services, Agra*, visited four schools during the month. He also rendered guidance service to the teachers of B.V. Rural Higher Secondary School, Bichpri. The Department organised film shows for the teacher-trainees of the B.R. College of Education and other local institutions.

Under the auspices of *the Department of Extension Services, Allahabad*, a four-day evaluation workshop was organised for eighteen teachers of Hindi. The Co-ordinator of the Department visited ten schools specially to explain the new approach to examinations and to popularize the usefulness of the Extension Services library. The library and audio-visual services of the Department maintained their usual acvities.

The Department of Extension Services, Isabella Thoburn College, Lucknow, convened a meeting of English teachers to discuss the method of controlled composition and fluency practice. Teachers were introduced to poems which were specially suited to provide fluency practice. The Co-ordinator also spent considerable time in giving practice to pupils of secondary schools in solving the new type tests in history and civics. The teachers and the principals of these schools showed keen interest in test drills and test performances. The Department exhibited four films during the month.

An audio-visual aids training course was organised by *the Extension Services Department, Government Constructive Training College, Lucknow*, for teachers of Lucknow region. The course, which lasted for six-days and was attended by seventeen persons gave training in the use of the 16 mm. film projector, epidiascope, film strip and slide projectors, tape recorder, silk-screen printing etc. The Department also screened five shows during the month.

The Co-ordinator of *the Department of Extension Services, Jabalpur*, discussed cumulative records and guidance with a group of teacher-trainees of the training college. Internal assessment was the subject of discussion at a seminar of career masters from the secondary schools of Mahakoshal. A state-level workshop was also held on evaluation in Hindi. A conference of sponsors of science clubs of U.P. and Madhya Pradesh was organised at the centre for twenty-nine science teachers. Shri P.S. Kapur, Science Consultant, Education Department, Madhya Pradesh, guided the discussions. Two extension lectures on Educational and Vocational Orientation and film shows were other activities at the centre.

Under the auspices of *the Extension Services Department, Bhagalpur,* a course-cum-demonstration lesson in English was organised at Jamui higher secondary school, Monghyr. The aim of teaching English to beginners was explained, accompanied by a demonstration lesson to show how the teaching of English could be made more interesting and effective. A six-day seminar on the "Teaching of English in Secondary Schools" which was attended by twenty two teachers discussed phonetics and the structural approach. Audio-visual, guidance and library services of the Department were maintained as usual.

A conference of sponsors of the science clubs in the States of Orissa, West Bengal and Bihar was organised by the Directorate with the assistance of *the Department of Extension Services, Cuttack.* Twenty-three sponsors of science clubs attended the conference. The Co-ordinator visited nine high schools and discussed methods of improving teaching in different subjects.

The Department of Extension Services, Turki, arranged a state-level evaluation workshop in mathematics. A symposium on evaluation techniques, and a talk on "New Trends in Education" were other features of interest. The Co-ordinator visited three high schools for follow-up work.

The Department of Extension Services, David Hare Training College, Calcutta, continued the week-end seminar on history (elective). A part-time course in music was also held on Tuesdays and Saturdays for teachers of high schools of the locality. The Department also organised a study circle meeting of teachers of Bengali. Teachers of social studies met to discuss the possibility of integrating the social studies syllabi of class IX and X. On the occasion of the College Reunion and Education Week, symposia were arranged on "the integration of Basic with the existing system of secondary schools", "the problem of teaching different languages in schools", "the revision of the B.T. Syllabus" and "the review of the present method of assessment in different subjects, specially English, history and mathematics in the school final examination". An exhibition of the work of pupils in secondary schools was also organised during the week when there was also a special programme of film-shows for teachers and students of secondary schools. The Department also convened the annual Conference of the headmasters of associated schools, when the participants expressed their views on the year's activities of the Department and made useful suggestions for future work.

Under the auspices of *the Extension Services Department, Government Training College, Hooghly,* the long-term week-end course in spoken English was continued during the month, and was attended by thirty-two participants. The Department continued its usual library and audio-visual services.

A week-end course on "Teaching

Procedures and Evaluation in History" was arranged by *the Department of Extension Services, Vinaya Bhawan, Vishwa Bharati, Shantiniketan.* The topics taken up for discussion were the scientific method of teaching history, the importance of local history, teaching aids, and evaluation. The participants prepared objective tests on different topics and drew up a list of suitable reference books both for subject matter and methodology. Another week-end seminar was organised by the Department on "Teaching Procedures and Evaluation in Bengali". This course covered the general principles of the study of literature, Indian and Western view points regarding the ends and purposes of the study of literature, synthesis of these view points and the different methods of study of the history of Bengali literature. A meeting of the Future Teachers' Study Circle was held at Vinaya Bhawan to discuss the "Assessment of Scholastic Attainments". School visits helped to discuss various problems with the staff.

CENTRAL ZONE

The Department of Extension Services, Osmania University, Hyderabad, organised a conference of the heads of multi-purpose schools on behalf of the Directorate. The Conference, which was attended by thirty-three Headmasters from the States of Andhra Pradesh, Bombay, Mysore and Kerala, made a detailed comparative study of the syllabuses of the elective courses, the lists of equipment etc. The Department also organised two educational exhibitions during the month. Five film shows were arranged at the Keshev Memorial Multipurpose High School in connection with the career conference held at the institution.

The Honorary Director of *the Extension Services Department, Warangal*, guided the deliberations of a six-day state-level evaluation workshop in general science, and accompanied by the Co-ordinator visited several schools during the month.

A six-day state-level workshop in general science was held at *the Department of Extension Services, Secondary Training College, Bombay.* A meeting of English teachers prepared details for the Instructors' Course for the teachers of English. The Department also organised a short Refresher Course on the teaching of English in co-operation with the English Teachers' Association, Bombay. About 125 teachers took advantage of this course.

The Extension Services Department, Ahmedabad, organised on behalf of the Directorate an all-India follow-up workshop for the heads of schools which had undertaken projects. The delegates visited local schools which had carried out projects and observed the important features of the activities presented to them through exhibitions, class-room teaching and discussions.

A symposium on "Training Facilities and Employment Situations" was arranged by *the Department of Extension Services, Tilak College of Edu-*

cation, Poona, for the benefit of fifteen career masters of the city. The Department also organised a workshop for twenty-eight geography teachers of Ahmednagar district. During his school visits, the Co-ordinator discussed their work and the ways in which the Department could help the teachers in their special problems. Audio-visual and library services of the Department continued as usual.

The Extension Services Department, Nagpur, conducted a four-day workshop of headmasters at Wardha. Twenty-three headmasters from seven States attended and discussed the experimental projects undertaken by their schools. The Department also organised a three-day seminar-cum-refresher course for fifty teachers of English of Chanda district. The programme included talks, discussions and demonstration lessons. A practical demonstration of the use of audio-visual aids in the teaching of English proved to be of much interest.

Under the auspices of *the Extension Services Department, Rajahmundry*, two state-level evaluation workshops in geography and physics were conducted for fifteen teachers. The participants listed objectives and related learning experiences and constructed test items in the subjects. The Department also organised a week-end seminar on the "Planning of the Year's Work in Mathematics in Form I". Twelve teachers of local secondary schools attended the seminar, discussed the defects in the teaching of the subject and planned the work for the early part of the year up to July. The Co-ordinator visited six schools and rendered advisory and guidance services.

SOUTHERN ZONE

The Co-ordinator of *the Department of Extension Services, St. Christopher's Training College, Madras*, visited a number of schools in connection with a course in home science, a report of which appears in this issue under the Highlights. The Department also convened a meeting of the central science club at which Miss E.J. James, Vice Principal of the College brought out the salient points in the teaching of science. The new concept of evaluation was explained to the members of the staff of the College and the teacher-trainees by the Evaluation Officer posted at the area.

Three educational exhibitions were organised by *the Department of Extension Services, St. Ann's Training College, Mangalore*, at three high schools in the rural areas. The Co-ordinator and the senior teachers explained the exhibition and gave talks on the human body, prevention of diseases, citizenship for democracy and 4-H Clubs. On the occasion of the sports meet of thirteen high schools at Hejmadi, the Co-ordinator arranged open air film-shows on International sports festivals, foreign games in the U.S.A., basket ball, athletics and Defence against Invasion.

Under the auspices of *the Department of Extension Services, Belgaum*, Mr. D. H. Spencer of the British Council conducted two refresher courses in English at Belgaum and Bijapur.

During the first course, he gave demonstration lessons in the teaching of poetry and grammar, and at the course held at Bijapur, he laid stress on the structural approach to the teaching of English and the proper development of pronunciation during all stages of learning. A state-level evaluation workshop in physics was also organised by the Department. A three-day conference of science club sponsors from Andhra Pradesh, Kerala and Mysore States was another activity at the centre.

The Co-ordinator of *the Department of Extension Services, Trivandrum,* visited six schools to render library services. The Department also arranged two state-level evaluation workshops, one for the teachers of general mathematics and the other for the teachers of social studies. The participants discussed the evaluation concept and listed objectives and constructed test items.

In connection with the follow-up work of the evaluation programme, *the Co-ordinator of the Department of Extension Services, Kozhikode,* visited nine schools during the month. The Department arranged film shows in three schools. A special film show was also arranged at the quarterly zonal conference at the Government Basic Training School, Palayad. Special meetings of the staff of the Training College and the Model High School staff were held to explain the evaluation programme. Similar conferences of the members of staff were arranged in eleven high schools when the staff were acquainted with the new concepts in evaluation and it was decided to prepare suitable test material for the ensuing annual examination.

The Department of Extension Services, Trichur, arranged week-end courses in general science, English and physical education. Forty-nine teachers attended these courses. The Department also arranged a two-day multi-subject seminar in Sanskrit, general science and mathematics. The Sanskrit and mathematics sections discussed learning experiences, while the science section examined the new approach to examination and evaluation. Another two-day subject-seminar in English and Malayalam was attended by twenty-nine teachers of English and twenty-five of Malayalam. A meeting of the study circle in science discussed intensive follow-up work in schools with regard to the teaching of general science, and the organisation of science clubs. It was decided to start a project on the teaching of science through the activity methods in three schools in the town.

Fifteen teachers attended a five-day seminar on the teaching of mathematics organised by *the Department of Extension Services, Annamalai University.* The participants discussed the objectives of teaching the subject, the causes of backwardness and remedial measures, the place and function of visual aids, recreational mathematics and evaluation in mathematics. Detailed lesson plans on three topics in arithmetic, algebra and geometry were also prepared. A three-day refresher course on library scheme was attended by twelve teachers,

The week-end course in English by Dr. G.S. Nutley continued during the month. The Co-ordinator addressed a conference of the Tanjore District Headmasters' Association and the staff of a high school on Action Research.

The Extension Services Department, Bangalore, conducted two evaluation workshops, one in general science and the other in general mathematics for forty-three teachers when suitable test material was prepared. The Department also organised a two-day training course-cum-seminar in audio-visual education. Beside including lectures on the theoretical aspect of the subject, the course helped the teachers in getting acquainted with the handling of audio-visual equipment such as projector. camera, film-strip project or and tape-recorder. The participants were also guided in making inexpensive teaching aids in different school subjects.

EXTENSION HIGHLIGHTS

Behaviour Problems

The Department of Extension Services, Central Institute of Education, Delhi, organised a seminar on "Behaviour Problems of Boys and Girls in Schools". Dr. B.D. Bhatia, Director, Child Guidance Clinic, guided the deliberations of the seminar.

Flower Arrangement

Under the auspices of the same Department, Mrs. Leagens of the Ford Foundation gave a demonstration on the "Techniques of Flower Arrangement".

The Challenge of Failures

A four-day seminar on the "Challenge of Failures in our Internal and External Examinations" was organised by *the Department of Extension Services, Aligarh,* in collaboration with the U.P. Madhyamik Shikshak Sangh, Mathura District. The participants discussed factors responsible for failure, adjustment necessary for reducing failures, and examination reforms.

Teachers' Seminar

The District Association of Teachers, Sagar, invited *the Extension Services Department, Jabalpur,* to help the Association in conducting a teachers' seminar. The participants, who numbered 150, discussed methods of teaching the different subjects and the administrative problems of higher secondary schools. The Department also arranged film shows on methodology of teaching and class-room discipline.

Social Studies through Cultural Programmes

In collaboration with the Greater Bombay Social Studies Association, *the Extension Services Department, Secondary Training College, Bombay,* arranged a cultural programme to show how the teaching of social studies could be made interesting and vivid through such programmes.

Audio-Visual Aids in Mathematics

The Department also arranged a seminar on the use of audio-visual in mathematics. Prof. C. Orloff, a UNESCO expert at the India Institute of Technology, Worli, Bombay, conduc-

ted the seminar. It was explained to the participants how algebra could be made easy and interesting to pupils. Following the seminar, Prof. R. Orloff visited three schools in Bombay and demonstrated some of the teaching aids prepared by him.

Educational Pilgrimage

A new activity to enrich in-service training programme has been undertaken by *the Extension Services Department, A.G. Teachers' College, Ahmedabad.* Under this programme, progressive schools in the jurisdiction of the Department have become centres of inspiration. Requests for visits to these schools are on the increase. During the month, the members of the executive of the Mahasana District Headmasters' Association visited four of these schools during their stay at Ahmedabad. The Co-ordinator arranged discussions with members of the staff of the project schools, and discussions about projects and project schools.

Home Science

The Department of Extension Services, St. Christopher's Traininq College, Vepery, Madras, conducted a course in Home Science on the four Saturdays of the month. The participants discussed problems of syllabus construction and considered in detail the practical work for both middle and high schools. They also discussed among other subjects "Interior Decorations", "Flower Arrangemeuts" and "the Principles of Colour and Design". Lectures were also delivered during this course on "the Principles of Cooking" and "Balanced Diets".

PUBLICATIONS

The following publications were brought out by the Extension Services Departments during January, 1960 :

1. Central Institute of Education, Delhi.	(1) Newsletter No. 44, November, 1959. (2) "Improvement of English Pronunciation"—a report of the seminar held earlier on the subject.
2. R.N. Training College, Cuttack.	Annual Report.
3. Teachers' Training College, Turki.	Annual Report.
4. Government Training College, Hooghly.	Library Bulletin No. X for the month of January, 1960.
5. St. Ann's Training College, Mangalore.	(1) A Report of the Workshop for Drawing Masters. (2) A Report of the Workshop for Science Teachers.

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Zonal Conference of Extension Services Departments

SOUTHERN ZONE

The annual conference of the Directors and Co-ordinators of the Extension Services Departments of the Southern Zone (Madras, Mysore and Kerala States), was held on the 29 and 30 January, 1960, at the Ramakrishna Mission Vidyalaya, 'Teachers' Training College, Perianaickenpalayam, Madras State. The Director of the Extension Centre attached to this college directed the conference, and it was attended by 23 Directors and Co-ordinators of the Extension Centres in the zone. Miss S. Panandikar, Director of the Directorate of Extension Programmes inaugurated the conference and participated in its discussions.

In her inaugural remarks Miss Panandikar stressed the need for intensive work with a small number of schools in organising health projects and in making the school more beautiful. Teachers could also be helped in adopting a new approach to teaching the various school subjects. In order to achieve a closer co-ordination among the Extension Services Centres, she suggested the formation of state-level committees consisting of the state Director of Public Instruction, Honorary Directors of the Centres and one educationist to be nominated by the Directorate. This committee should meet at the beginning of each financial year and plan the work of the Centres. She also requested the Departments of Extension Centres to give all possible help in the evaluation work of the Directorate. Follow-up work in this subject could be attempted at least in standards VIII & IX and teachers could be helped to think in terms of the objectives of teaching the various subjects.

Directors and Co-ordinators later met together in state-groups and discussed their special problems. Below are given the resolutions passed by the three state-groups that were represented at this conference.

Madras Group :

1. The Directorate be requested to address the Government of Madras, requesting liberalisation of the conditions regarding the deputation and participation of teachers at courses and provision of the same facilities as in other states.

2. The Government of Madras be requested to enable Co-ordinators and teachers in different centres to participate in programmes organised in places outside their own area of

operation by the modification of the G.O. delimiting areas for purposes of T.A. and D.A.

3. The Directorate be requested to permit the expenses of the deputation of a Committee consisting of Dean R. Ramanujachari, Principal P. Duraikannu Mudaliar and Miss Samuel to wait on the Director of Public Instruction, Madras, to represent that the laboratory fees collected in high schools be permitted to be utilised for science club activities and that the audio-visual education fees be permitted to be utilised for the making of visual and other aids.

4. The refreshment allowance for each local participant be raised to one rupee exclusive of conveyance charges.

5. The Director of Public Instruction, Madras, be requested to make special provision for the disbursement of T.A. and D.A. to participants from the aided institutions of Kanyakumari District.

6. The Directorate be requested to sanction at least Rs. 250 for T.A. and D.A. to members of the Advisory Council coming to attend meetings.

Mysore Group :

1. The State Government be requested through the Director of Public Instruction to give an advance to the extent of 50 per cent of the State Grant to the various Centres by the first fortnight of April each year, for the conduct of activities during the vacation months of April, May and June.

2. In case the advance is not forthcoming, the Directorate of Extension Programmes for Secondary Education be requested to permit the use of the funds allotted to the Extension Services Centres for this purpose, subject to later recoupment.

3. The Director of Public Instruction be requested to raise the minimum D.A. for the participants to Rs. 3.00 relaxing M.C.S.R. provision as is done in the case of some state-level seminars.

4. State-level conference of Honorary Directors, and Co-ordinators in the state be held annually in association with the Deputy Directors of Public Instruction of all divisions, preferably in April.

Kerala Group :

1. The State Government be requested to give an advance of at least 50 per cent of the State Grant to various Centres in April. For the conduct of summer vacation courses each year, the Centres may be permitted to draw the amount in a lump sum.

2. Early steps may be taken by the Directorate regarding pension contributions etc., of the Co-ordinators to be remitted to State accounts.

3. Workshops etc., should not be conducted during term time.

4. The following areas of operation of the different Centres are fixed from April, 1960 :

Centre	*Education Districts*
Trivandrum	1. Trivandrum
	2. Quilon
	3. Pathanamthitta
	4. Aleppey
	5. Tiruvalla
	6. Kottayam

Trichur	1.	Palai
	2.	Muvattupuzha
	3.	Ernakulam
	4.	Irinjalakuda
	5.	Trichur
	6.	Palghat
Kozhikode	1.	Ottappalam
	2.	Malappuram
	3.	Kozhikode
	4.	Tellicherry
	5.	Kasergod

5. It is also recommended that all in-service courses for secondary schools should, as far as possible, be arranged only through one channel, namely, the Department of Extension Services in each area.

Resolutions of the Conference

The conference resolved unanimously that the Directorate of Extension Programmes for Secondary Education be requested

1. to vest authority in the Honorary Director of each Centre to administer the centre's funds and to maintain the degree of flexibility that had obtained under the form set-up ;

2. to accord permission to the Honorary Directors to incur by re-appropriation additional expenditure on the maintenance of the jeep over the ceiling fixed by the Directorate in order to meet the exigencies of each Centre ;

3. to provide an alternative arrangement for insurance coverage for the occupants of the jeep as the system of insurance of the vehicle had been discontinued :

4. to give definite directions to each Centre as regards the service conditions of the employees other than the Co-ordinator ;

5. to introduce a uniform salary scale for Co-ordinators which would be at least Rs. 400-30-700 ;

6. to secure the participation of the respective Directors of Public Instruction in the zonal conferences ;

7. to prepare and communicate a list of resource persons for seminars if available in the area of each Centre ;

8. to secure the association of the Honorary Director and the Co-ordinator of each Centre with state-level programmes sponsored by the State ;

9. to provide one month's training in audio-visual education to Co-ordinators ;

10. to request the State Governments to give due recognition to in-service training as part of the teachers' professional equipment, and give suitable recognition and incentives to those taking such training ,

11. to inform, and have prior consultations with the Extension Centres before launching programmes on a state level ;

12. to request State Governments again to make a grant of Rs. 1,000/- for refreshments to participants in addition to Rs. 6,000/- for T.A. and D.A. ;

13. to release the grant to each Centre before the commencement of the period for which it is due and to reduce the number of instalments in which it is made to not more than two per year ;

14. to have the accounts of the Centres audited for 1958-59 at an early date

15. to formulate suitable plans for providing assistance to the Co-ordinators because of the heavy volume of work they have to do ;

16. to request State Governments to increase the D.A. of participating teachers to a minimum of Rs. 3 per day ;

17. to approve a minimum of Rs. 1,500 for annual expenditure on T.A. and D.A. to the staff of the Extension Services in view of the visits and activities which are organised outside headquarters ;

18. to secure co-ordination among the different agencies engaged in in-service education such as the University, State Governments, and the British Council, and so help the Centres to avoid duplication and to plan programmes and follow-up activities ;

19. to make available a special grant for the purchase of films and filmstrips for the use of each Centre.

CENTRAL ZONE

The annual conference of the Directors and Co-ordinators of the central zone (Bombay and Andhra Pradesh) was held on the 31st January and the 1st of February, 1960, at the Government Training College, Kurnool. Shri L. Bullayya, Principal and Honorary Director of the Centre, acted as Convenor of the conference. The representatives of the following Extension Services Departments were present :

1. Government Training College, Kurnool.	Director and Co-ordinator.
2. S.M.T.T. College, Kolhapur.	Director and Co-ordinator.
3. Tilak College of Education, Poona.	Director and Co-ordinator.
4. Government Training College, Rajahmundry.	Director.
5. Government Training College, Warangal.	Director and Co-ordinator.
6. A.G. Teachers' College, Ahmedabad.	Co-ordinator.
7. Faculty of Education and Psychology, Baroda.	Co-ordinator.
8. University Training College, Nagpur.	Co-ordinator.

The Extension Services Departments, S.T. College, Bombay, and the College of Education, Osmania University, Hyderabad, were not represented.

Miss S. Panandikar, Director, Directorate of Extension Programmes for Secondary Education, attended the conference from the afternoon session of the first day.

In the first session, the reports of the different centres were presented to the conference. The discussions that followed brought up the following points :—

(1) With regard to the question whether content courses could be organised, it was pointed out that all teachers of social studies and general science do not possess adequate knowledge in the basic subjects. In such cases it may be necessary to have courses on content also. Besides, it is found necessary to re-orientate un-

trained teachers who had been serving in schools for a long time.

(2) It was pointed out that it was possible to economise expenditure by running three or four workshops and seminars concurrently.

(3) The editing of reports of seminars and workshops and correcting proofs took considerable time so that it was not possible to release any report within four to six weeks. The conference expressed the opinion that some type of help was necessary to look after the publications.

(4) Regarding the working of the central science club, it was observed that wherever the club was located in the college, school students found it difficult to attend the sessions since they had to cover long distances. It was also suggested that teachers and teacher-trainees of the training colleges may be made members of the central science club so that they in turn could carry the work to their respective schools.

(5) It was suggested that when books of the Extension Services Centres issued to teachers were lost, they should be replaced as far as possible and not merely made good by a cash recovery. Otherwise there was a possibility that some of those books would never be replaced at all at the Centres.

(6) In cases where teachers found it difficult to attend week-end seminars and courses, Centres could explore the possibility of organising the programmes in the evenings of working days.

Problems and Suggestions

1. *In view of the fact that highlights of some of the activities of Extension Centres are published in Teacher Education, is it, necessary to continue the publication of Extension Services Newsletter in the journal.*

The conference expressed the opinion that it was desirable to retain both the Extension Services Newsletter and the highlights in *Teacher Education*, for, the Newsletter provided information regarding the various programmes attempted at each Centre, which would be of use to other Centres in shaping and enriching their programme. The highlights which included only those programmes which were of an outstanding nature would leave out much of other useful information.

2. *Problems arising out of the transfer of control of the Extension Services Departments to the Governing Bodies of Private Colleges.*

It was pointed out that problems which arose out of this transfer could be referred to the Directorate which would take up those questions with the respective managements.

3. *Providing training to the staff of the Extension Services Department in silk screen printing process.*

It was observed that several Centres were not able to use the silk screen since they did not have a skilled person to operate it. Although a Co-ordinator was acquainted with the use of this screen it was felt that an artist exclusively trained for this purpose was necessary. It was observed that the Centre at Kurnool had a suitable trained artist in the college and with his help several charts prepared in the audio-visual workshop were being duplicated.

It was pointed out that the DEPSE would, in consultation with the Director of the National Institute of Audio-Visual Education consider the organisation of a course to train artists from each centre in silk sceen painting.

4. *Increase in the rates of T.A. and D.A. to the participants.*

It was stated that the daily allowance given to the participants according to the state rules based on the salaries of the teachers was not sufficient to meet the expenditure incurred at seminars etc., and teachers, therefore, found it difficult to put in full attendence. In certain states where the rates of D.A. were lower than in other States, the difficulty was even more acute. The conference, therefore, requested that the Directorate should address the State Government and request them to prescribe a common ad hoc rate of daily allowance for participation in seminars etc., of the Extension Services Departments.

5. *Should the Directorate maintain a team of consultants to assist the different Extension Services Centres ?*

It was pointed out that it was not possible for the Directorate to maintain such a team since it involved financial commitments. A more practicable measure would be for each centre to propose a list of resource personnel from different areas to the Directorate which could thereupon be consolidated and circulated to all the Centres so that they could use the services of the experts mentioned in the list.

6. *Flexibility of budgets should be provided under heads other than salaries, to facilitate more expenditure under one or more heads. The Centres were finding it difficult to plan more activities as the ceilings had to be observed.*

It was, felt that a certain amount of flexibility would facilitate a more intense programme of work. Any increase under a sub-head other than salaries could be considered by the Directorate as and when it was found necessary during the course of the year if the Centre advanced specific reasons for the same.

7. *State-wise co-ordination of publications.*

Certain publications brought out by a Centre may be useful for teachers outside the area of that Centre. It would perhaps be profitable to pint publications in co-ordination with other Centres. The conference agreed that the concerned Co-ordinators could plan in advance their publication programme and divide the work between themselves with due regard to the ceiling under the budget sub-head.

8. *The State grant of Rs 6000/- should be given to the Departments of Extension Services by the Directorate and recovered from the State.*

It was pointed out that it was not possible for the Directorate to receive these grants from State Governments. The Directorate would, however, try to see that the State Governments released these grants in advance.

9. *Whether the publications of Extension Services should be priced.*

The conference came to the conclusion that publications of Extension Services Centres should be distributed free of cost. If more than 500 copies

had to be printed special permission had to be sought.

10. *Relaxation of the rule that an amount of Rs. 300/- should be collected for the Central Science Club by subscription.*

Under the rules it is required that school science clubs which are financed by the Directorate should raise a contribution of Rs. 300/- per year by way of subscription from its members. As many schools find it difficult to raise this amount, the conference suggested that the clubs be permitted to raise whatever money is required by way of subscription or any other means.

11. *Follow-up of activities of the Extension Services Departments.*

It was pointed out that it was not possible to conduct follow-up work for all the participants of seminars and workshops. It was agreed that this aspect could be discussed in the ensuing Co-ordinators' workshop. The Directorate proposes to bring out a pamphlet on how to organise effective follow-up work.

12. *How to ensure the co-operation of the Inspectorate in the work of Extension Services Departments ?*

It was suggested that the Directorate should request the State Departments to depute members of the Inspectorate to participate in the activities of the Centres.

13. *Organisation of joint programme by two or more Centres.*

Attention was drawn to the composite workshops in engineering and commerce organised at Kurnool by the four Extension Centres of Andhra Pradesh and it was suggested that such joint programmes could be organised *within* a State.

14. *To request the Directorate to make available the services of a team of three Evaluation Officers in turn to each Extension Services Centre during the summer vacation.*

It was pointed out that individual Centres could request the Directorate whenever the services of Evaluation Officers were required.

Administrative Problems

The conference then discussed various administrative problems, when the following general issues were raised.

(1) The grants to different Centres were now being received in three instalments. Due to certain procedural difficulties the grants were not always received in time. The conference was informed that the Directorate was considering the release of this grant in two instalments during the next year.

(2) In the case of some of the State Evaluation Workshops, due to certain administrative reasons, teachers who were not originally selected attended the workshops. It was suggested that in such cases the Extension Services Centres should provide some orientation programme in order to enable such teachers to derive the maximum benefit from workshops.

(3) The conference requested the Directorate to send to the Extension Services Departments the names of participants of State workshops and seminars, sufficiently early so that they could get into touch with the participants in time.

(4) The delegates felt that in certain exceptional cases the ceiling of Rs. 500/- fixed for T.A. and D.A. for the Extension Services staff should be made flexible.

Resolutions

The conference unanimously passed the following resolutions :—

(1) In view of the fact that hostel arrangements are not available during the working months of the year and that schools cannot spare rooms for the lodging of participants, the conference recommended that some funds may be reserved for lodging purposes under the head "contingencies" to be spent on workshops organised on behalf of the Directorate.

(2) As the Co-ordinators are extremely busy with Extension work in schools, they require assistance in office routine, printing and publications. The conference therefore, resolved that the D.E.P.S.E. be requested to sanction the post of an assistant to each Extension Services Department. If this was not possible, the Department may be allowed to get this assistance from a suitable person by paying a fixed allowance of Rs. 100/- per month as honorarium.

(3) The Conference resolved that the Directorate be requested to permit each Extension Services Department to purchase books on evaluation to the value of about Rs. 100/- from the balances left over at the Centre.

NORTHERN ZONE

The annual conference of the Honorary Directors and Co-ordinators of the Extension Services Departments of the northern zone was held in the Government Central Pedagogical Institute, Allahabad, on February 3 and 4, 1960. Of the 11 Extension Centres located in this zone, the following nine were represented at the conference, the Centres at Meerut and Aligarh not being able to participate. Miss S. Panandikar, Director of the Directorate for Extension Programmes for Secondary Education, was present at the conference throughout. Shri T. S. Mehta, Evaluation Officer also attended.

1. B. R. College of Education, Agra	Joint Director and Co-ordinator
2. Banares Hindu University Varanasi	Co-ordinator
3. Government. Constructive Training College, Lucknow	Director and Co-ordinator
4. Government Post-Graduate Basic Training College, Bhopal	Director and Co-ordinator
5. Government Teachers' Training College, Dewas	Director
6. Government Training College, Raipur	Director and Co-ordinator
7. Isabella Thoburn College, Lucknow	Co-ordinator

8. Prantiya Shikshan Mahavidyalaya, Jabalpur	Director and Co-ordinator
9. Govt. Central Pedagogical Institute, Allahabad	Director, Joint Director and Co-ordinator

Dr. S. Saran, Principal, Government Central Pedagogical Institute, Allahabad, directed and presided over the deliberations of the conference.

Welcoming the guests, Dr. Saran expressed his appreciation of the good attendance at the conference and emphasized the usefulness of these meetings, especially when country-wide programmes for educational reconstruction were being implemented. Through frank and free exchange of views and experiences, they gained both new ideas and self-confidence. The Extension Services Project, he said, was a democratic approach to the dissemination of progressive educational ideas and practices.

Reports and Discussions

The delegates then presented the reports of the work done during the year at their Centres. The reports and the discussions that followed brought out the following points :

(1) *Student-teacher participation in the extension activities.*

Opinion was varied as to whether students under training should participate in the extension activities. Some felt that they should receive a foretaste of this programme and carry the message wherever they went. Others thought that this pre-occupation with extension activities might distract them from their normal work. It might also result in overcrowding of the various programmes. A third opinion held that students should not be completely debarred, but their participation should be judiciously restricted. The consensus of opinion was that while students might be admitted to some of the activities of the Department this should neither interfere with nor inflate the normal programme.

(2) *Study Circles.*

It was suggested that study circles of teachers should be organised by grouping neighbouring schools together. It was pointed out that teachers by themselves did not show enough initiative in such group-work and at the same time it would not be possible for the Co-ordinator to direct all such study circle meetings or to arrange for suitable resource personnel. It was, therefore, felt that study circles of a general kind should be left to the initiative of the teachers and principals concerned but in respect of study circles for special subjects, teachers from a larger area might be invited to a central place to conduct their discussions under the guidance of the Co-ordinator.

(3) *Invitation Seminars.*

It was suggested that schools should be encouraged to organise their own seminars and workshops to which the Co-ordinator should be invited. If necessary, he might be called upon to arrange for suitable resource personnel to direct their activities. It was felt

that greater attention to this type of activity would yield worthwhile results.

(4) *Experimental Projects.*

The suggestion was made that the Directorate of Extension Programmes for Secondary Education should publish suitable literature on the work that was being done at various Centres in respect of experimental projects. The guidance and information given by periodical publications in *Teacher Education* was in the general opinion of the conference inadequate. It was pointed out that experimentation in teaching should be encouraged on all fronts. It was quite possible to carry out a number of teaching projects without much financial outlay.

(5) *Intensive Work in Schools.*

The conference next discussed the problem of how to combine the demands of extensive and intensive work. It was suggested that the motto "serve a small area but serve it well" would be helpful. The extension work could no doubt be spread to other districts but the programme in the districts first chosen should be intensified at the same time.

Problems and Suggestions

1, *Change of administrative control of Extension Centres.*

It was clarified that the Directorate was taking steps to work out all the implications of the transfer of control so as to settle them with the State Governments.

2. *Staff of the Extension Services Departments.*

(a) Increase in staff

The present staff of the Extension Services Department was found insufficient to cope with the volume of work. The conference suggested that the posts of an Assistant Co-ordinator, an additional clerk and a whole-time operator be provided for each centre. It was Miss Panandikar pointed out that it was not possible to implement this suggestion. Regarding the proposal that an additional clerk might be sanctioned wherever the budget allowed, she said that this would not be in the interest of uniformity. The managements or State Governments concerned could, however, provide for the additional post if they deemed it necessary.

(b) Payment of over-time allowance to sub-ordinate staff.

Since the extension services activities were not confined to scheduled office hours, it was suggested that some compensation by way of over-time allowance was desirable. Miss Panandikar pointed out that this was not possible but suggested that some arrangements could be arrived at through which the staff would get some relief. She also thought that the Extension Departments need not perhaps observe rigid office hours and that some sort of flexibility could be adopted.

3. *Budgets of the Extension Services Departments.*

Regarding delegation of power to the Honorary Directors to re-appropriate funds from one head to another.

It was suggested that the Directorate would consider requests on this subject received from Honorary Directors most sympathetically within the limits set by rules.

4. *Equipment.*

(a) Additional equipment for the Centres.

Some Centres wanted a convertor to enable the use of audio-visual equipment which work only on A.C. current. Others wanted a generator. They were advised to send in their requirements to the Directorate.

(b) Repair of T.C.M. Equipment.

The Centres were advised to arrange for minor repairs locally but in respect of major repairs the Directorate could be consulted. It was, however, necessary to have the repairs done at standard firms.

(c) Photographic Material.

On the issue of out-dated and unused photographic material, the conference was advised that where feasible it should be used as quickly as possible. The opinion of experts in the matter was that the material was still useable.

5. *Activities of the Extension Centres.*

(a) Guidance personal.

The delegates expressed the general need for guidance from the experts attached to the Directorate in carrying out certain activities but they were informed that under the existing conditions of limited personnel, it was not possible to meet all the demands in this regard but efforts would be made to arrange for guidance through periodical Co-ordinators' workshops.

(b) Follow-up of Extension Activities

It was pointed out that most of the extension activities did not succeed in securing proper implementation. Mere persuasion did not go far enough. It was suggested that the state-level co-ordination committees might be able to tackle this problem. The State Departments of Education should be kept informed about the work done by the Extension Centres so that at the time of school inspections these facts could be taken into consideration.

(c) Participants in Extension.

There was a general feeling among the delegates that really suitable teachers did not come forward to participate in the workshops and seminars. This was due partly to the lack of incentive to teachers to involve themselves in such participation and partly due to the reluctance of Education Departments to release capable teachers for the purpose. In order to get over this difficulty, it was suggested that a vigorous campaign should be started to convince the teachers and principals about the utility of these activities. Also the managements and educational authorities should be persuaded to take into consideration the degree of participation of their teachers in extension activities while assessing their work or considering promotion. At the same time, it was pointed out that mere participation in activities was not in itself sufficient or reliable justification for promotion.

6. *Extension Services Library.*

The consensus of opinion was that the library service of the Extension Departments was being seriously handicapped by lack of books in Hindi and also of books on subject-content particularly those that would be useful at evaluation workshops. Further, this library would require constant replacement. There was, therefore, urgent need of a recurring grant to meet the

cost of such replacement and also of a special grant for books in Hindi and content material.

It was suggested that the Directorate as well as the Centres should address the State Gavernments for the sanction of a grant for this purpose.

7. *Audio-Visual Services.*

It was pointed out that the effectiveness of audio-visual services greatly suffered for want of a whole-time operator and the lack of training of Co-ordinators in this subject. It was pointed out that the appointment of a whole-time operator was not yet contemplated but the Directorate proposed to arrange for a one-month training course on audio-visual education during the coming year, to which Co-ordinators or members of the training staff would be invited.

8. *Miscellaneous.*

(a) The need for co-ordinotion in the programmes of the Extension Centres.

Such co-ordination was found necessary if not at the zonal level, at least at the state level. It was suggested that the Co-ordinators in each State should meet in a conference to which the Director of Education and other senior officers of the State Education Department would be invited. Attention was invited to the proposal regarding the establishment of State Co-ordination Committees.

(b) Write-off of Materials.

The limit up to which Honorary Directors would be authorised to write-off unserviceable articles was under the consideration of the Directorate and a clarification would follow in due course.

Resolutions

1. Resolved that additional staff be provided for each Extension Services Centre since the work was increasing rapidly on account of new schemes.

2. Resolved that if the Directorate of Extension Programmes for Secondary Education is unable to provide for such additional staff it may request the State Government/Managements to provide for

(i) an Assistant Co-ordinator or the payment of an allowance to some member of the College staff for assisting the Co-ordinator.

(ii) an upper-division clerk for each Extension Services Department.

3. Resolved that considering the responsibility and work which the Honorary Directors of Extension Services Departments have to undertake, a suitable allowance in the form of an honorarium should be paid to them by the Directorate of Extension Programmes for Secondary Education.

Recommendations

1. The peon and driver should be appointed on a time-scale and should be provided summer and winter uniforms.

2. A flat rate of Rs. 3-instead of the usual D.A. may be permitted to be spent out of the State Government grant for board and lodging arrangements when residential workshops and seminars are organized.

3. The State Government should make timely payment of grants to the Extension Departments.

4. The Directorate of Extension Programmes for Secondary Education

should minimize the number of instalments in the payment of their grants.

5. A Hindi typewriter should be supplied to each centre to carry on necessary work in Hindi.

6. Participation in Extension Services activities should be taken into consideration at the time of school inspection and assessment of teachers' work.

7. There should be provision for a recurring grant for Extension library for purchase of books and also for subscribing to educational journals.

8. A special grant should also be made to each Extension Services library for purchase of books in Hindi and on subject-content.

9. A whole-time operator should be provided for running the audio-visual services.

10. Each centre should also be equipped with a converter as well as a generator.

11. Co-ordinators should also be associated with the proposed State-level Co-ordination Committees.

12. The centres should launch a drive for subscribers to *Teacher Education.*

13. The news from centres should continue as a regular feature in *Teacher Education.*

14. The centres which act as venues for zonal conferences should in future arrange for visits to some of their participating schools.

15. The next annual zonal conference may be held in Madhya Pradesh.

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—Editor

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BOMBAY CALCUTTA MADRAS

IN-SERVICE TRAINING

THE WORKSHOP METHOD

Chester L. Sterling

Usage often dulls the edge of the original significance of terms. Educational terms are even more vulnerable to this process, and not infrequently we meet with words which have undergone a mutation of significance. "Workshop" is one such instance. Being one among a group of related terms, it has come to be used rather loosely as synonymous with seminars, conferences etc. In this article, Mr. C. L. Sterling, T.C.M. Consultant in the Directarate, takes us back to the original concept and method of the "Workshop" in the strictest sense of the word, and tells us precisely how a workshop should be organised. —Editor.

Educational systems, particularly below the college level, have never before attempted to do so much for so many. The needs of youth, especially those in secondary education, are both real and numerous in these demanding decades of the present century. As individual societies strive to strengthen and improve themselves internally and work more co-operatively with other societies, education is expected to be a principal term in any leavening social formula. The implications of this steadily evolving challenge from educational administrators down to the newest cadet teacher are such that just keeping aware of the expanding objectives is a significant achievement in itself.

To provide educationa lfacilities and then see that their inter-relationships worked in a planned way to the advantage of every learner was hardly considered to be a function of traditional education. If subject matter may be likened to a medical prescription, the learner was presented with the several ingredients, was expected to compound them himself, and apply the results wherever and whenever needed. If the learner did this well he was supposed to be an educated person. If he did it poorly because of insufficient and inadequate educational assistance, he found himself excluded from the category and he became a member of a vast group of so-called self-educated persons.

Now the mounting pressure of potential learners who are legislated into school attendance demands that some of the traditional concepts of the

teacher's functions and how he has to be educated to perform them be re-evaluated in the light of greater number and changed needs. If it is fair to assume that teachers and teaching can become somewhat outmoded, it is to reduce this factor of teacher obsolescence that in-service training programmes have been introduced. Since the number of teachers who can be spared for such training at any one time is limited and since maximum benefits must be obtained in the available time, it follows that only those techniques which have proven their worth should be used. One of the better known techniques in use with experienced teachers who desire to keep pace with progressive educational methods is the workshop.

Meaning, History, and Function

The term "workshop" practically defines itself, for it implies that some kind of productive work is done by skilled persons in an environment which secures the kind of results commonly obtained in a shop. In the field of education it is a borrowed term. Commerce and industry made use of it long before it was adopted and used by educators. Kelley[1] (and others as well) speaks of the word "workshop" as "the name given to a bold and novel experiment in education".

In 1936 the first educational workshop was organized at the Ohio State University under the direction of Ralph W. Tyler, then Chairman of the Department of Education, University of Chicago. As pointed out by O'Rourke and Burton[2], this first workshop orginated as follows :

> This workshop was a part of the Eight-Year Study and grew out of the demands of the teachers participating. The groups were not subjected to lectures or reports but went to work on the actual problems confronting them as teachers within the experimental programme.

It is significant to note that the work that was done was performed by by all those who participated. The very topics originated in the minds of the participants who, drawing upon a number of resources, ultimately reached solutions. The processes used involved co-operation and the exhaustive use of the resource material and personnel which was made available. Further, the processes used were reported to be personally satisfying, made valuable contributions to professional growth, added to the understandings and facilities wherewith professional people learned to work together and developed the kind of leadership that exerts much influence when each participant returns to his own school.

Tyler[3] himself defined the scope of the workshop technique in a way that is still considered authoritative :

> The workshop is an arrangement whereby a teacher or a school

1. Earl C. Kelley, *The Workshop Way of Learning*. New York: Harper & Brothers, 1951.
2. O'Rourke, Mary A., and Burton, William H., *Workshops for Teachers*. New York : Appleton-Century-Crofts, Inc., 1957, p. 1.
3. Tyler, Ralph W., "Trends in the preparation of Teachers," *School Review*, April 1943, pp. 207-212.

officer may work intensely on a problem which he brings from his own school and may obtain the assistance of staff members of the teacher training institution. Typically a summer workshop runs for about six weeks and includes staff members from various fields of study, particularly from the fields of the curriculum, student personnel, evaluation, and administration. Workshop participants interested in similar problems form into small groups, and they also work individually with the guidance of various faculty members who give help on the particular difficulties that they face.

Participation

Teaching effectiveness has been traditionally considered to depend directly on the number of years of teaching experience If a teacher possessed one or more degrees, if his certificate declared him fit to teach most of the subjects in an academic curriculum, if he showed himself capable of dealing firmly if expressively with cases of discipline, and if his lectures were scholarly and were delivered with a strong voice, finally and if students who were expected to pass did pass under his instruction, he was a good if not a superior teacher. The teacher usually attended an institute for one to three days each year and listened while others lecturered with equally commanding voices, spoke inspiring words on a wide range of subjects generally far removed from the work the teacher was doing. He then returned to his school and continued to follow pretty much the same routine which he had been following throughout the years of his experience.

The students of this teacher were not noted for their participation in classroom work nor was such participation encouraged. They were most successful as good listeners ; they took copious notes ; from his objectives and methods, they came to know what their teacher expected of them and to the best of their ability tried to memorize and give the best possible returns periodically. Since original thinking, learning while doing, and cooperating with other students on developmental work are not considered essential factors in this processes of learning, the teacher of such students would hardly find a workshop either challenging or stimulating.

Fortunately, however, there are teachers whose years of experience may be considerably shorter than those of the teacher cited above but who are just as dedicated to their work. Besides, they are most desirous of exchanging points of view and working cooperatively with other teachers so that together they can learn to cope more successfully with improved and newer educational practices. Thereby such teachers hope to do a better and more satisfying job of teaching and bring into the lives of their students those enrichments which predispose them to greater success in life. For such teachers the workshop when properly conceived, understood, instituted, and organized

4. O'Rourke and Burton, *op. cit.*, pp. 5ff.

has much to offer as an agency of in-service training.

Essential Characteristics

After more than two decades in which workshops for teachers and other educational personnel have been in operation, it is only logical to expect that certain essential characteristics have been determined. O'Rourke and Burton[4] have stated the more significant ones as follows :

1. The over-all purpose must be clearly defined.

2. The activity in the workshop must be based upon the problems, needs, and interests of the participants.

3. The specific problems of the participants should be allowed to emerge and be defined without pressure or steering from the instructor.

4. Individuals with common problems should form tentative and flexible groups for work.

5. Participants should do the bulk of the work on their own problems, with assistance from staff members on call.

6. The planning and process of the workshop is co-operative and participatory throughout.

7. The personal and social growth of individual participants should be fostered as well as the solution of their professional problems.

8. Evaluation is continuous and exercised on products and processes, not on persons.

9. The length of the session must be adequate.

10. The collection of all resource materials of kinds likely to be of value to participants should be as extensive as finances permit.

11. The instructional staff should represent a wide diversity of personnel.

12. The full-time staff may be based on the ratio of one member for each 12-15 participants. Some of the specialists may be on a part-time basis.

Importance of the Time Factor

One of the more significant conditions which an effective workshop must meet is that of adequate time. The over-all period should be divided into three parts (a) time for planning, (b) time for work sessions, and (c) time for evaluation. Expert opinion generally holds that three weeks represent the irreducible minimum. Summer sessions of 6-8 weeks can produce excellent results for only with such an amount of time can sessions be carried on and not be affected by such undesirable characteristics as (a) working under pressure; (b) trying to go ahead too rapidly, and (c) having too much imposed organization. When shorter periods of time than the ones suggested become necessary, the term "workshop" should be changed to such names as conference, panel, committee meeting, symposium, institute, etc. The procedures to be followed then must be in accordance with the nature of such gatherings, for a more limited time makes this necessary. It should be borne in mind that the end product of a good workshop is expected to be of too high a quality to permit the component parts to be thrown together. To do this ignores the very essential factors of individual participation and

growth which justified the use of this technique in the first place.

Evaluation

The evaluation by each workshop participant is difficult to secure if the workshop is allowed to terminate without proper provisions being made for collecting necessary data. It is even more difficult if one desires to find out what desirable changes have taken place that make each participant more effective in the classroom, laboratory and shop. The first kind of evaluation could be more effective if sufficient time was allotted to it instead of superimposing it on the usual social activities of the last afternoon of the last day which is too frequently the case. This is simply not a part of the technique of a well-operated workshop. The second kind of evaluation involves follow-up either by questionnaire or personal contact. Both are highly desirable and if the details are worked out as a part of the workshop programme itself, additional good will accrue to all participants.

Actually, the evaluation of the workshop itself should be a continuous process in which all participate. Each participant should keep a running appraisal of what the technique is doing for himself as an individual, and to his fellow participants, the resource personnel and the programme as a whole. To do these things most effectively, check lists and a variety of objective questions should be prepared and used by the staff and the participants. The possibilities of these instruments are limited only by the imagination of those who consider the implications of all facets of the workshop and draft the necessary devices for securing the data. Finally, it must be pointed out that the values inherent in adequate evaluations cannot be disregarded if the workshop is to accomplish its intended purposes.

Present Efforts of In-service Training

On several occasions during the past year, the writer has been requested to conduct in-service training programmes for teachers in the technical stream of the multipurpose high school. Unfortunately, in no instance was the time allotted long enough to conduct these programmes on the lines of a workshop. However, in the most productive instance the group was large enough (25) to allow five committees to do some work over an eleven-day period. Certain subjects not necessarily originating in the minds of the participants but acceptable to the group as a whole were investigated on each group's own time. Obviously, the participation was not what it should have been, for there were young and inexperienced teachers on each committee. The workshop technique is not effective with inexperienced personnel. As expert opinion has pointed out, the workshop "is not a device for orienting new teachers, nor for giving in-service training to beginners, to untrained recruits."[5]

[5]O' Rourke and Burton, *Ibid.*, p. 10.

The terms of reference observed by the members of the five committees who were compelled for want of time to make too brief reports before the entire group were as follows :

1. To develop a set of objectives that will be suitable for (a) the Technical stream, and (b) the Agriculture stream, in a multipurpose high school.

2. To select (job) operations from the woodwork course of study (prepared by the consultant) which would be suitable for a multipurpose high school wood shop.

3. To select (job) operations from the metal turning course of study (prepared by the consultant) which would be suitable for a multipurpose high school turning shop.

4. To indicate types of questions and their content which would be more desirable for use in both internal and external examinations for multipurpose high school shop students.

5. To list the significant factors and features of a well-prepared operation sheet for (a) lathe work, (b) electric work, and (c) sheet metal work.

Despite the handicaps of too much lecturing, too much material to cover, too few resources (library), and too much dependence on the leader (consultant), a considerable amount of interest was aroused as the several groups went about their assignments. There seemed to be sufficient evidence to indicate that experienced teachers of technology would work effectively in a more genuine workshop setting if certain additional and essential factors were adequately provided and suitably controlled. Under such conditions the writer should like to see similar groups analyze and reach conclusions while working on the following topics and using the workshop technique.

1. Trade analysis and course organization

2. Criteria for selecting technical students

3. Correlating the "core" and the "shop".

4. Internal assessment techniques

5. Projects for developing basic skills

6. Criteria for preparing instructional sheets

7. Equipment requirements for developing basic skills

8. Objectives of the technical stream

9. Guidance and the use of cumulative records

10. Aptitude testing.

Summary of Conclusions

In an attempt to summarize what has been written, the writer is of the opinion that considerable justification has been given for in-service training. Whether or not ample evidence has been presented to show the workshop in its true light and as the authorities consider it, may be open to question. However, there is a strong piece of supporting evidence in an article written several years ago by Leonard L. Boykin[6] which may further clarify the position and stimulate our think-

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Boykin, Leonard L., "What is a Workshop?", *Progressive Education*, January 1955, pp. 5-7.

ing. The writter presents it as more or less a summary of what has been already stated.

"The term 'workshop' is the name given to an experiment which places the responsibility for learning upon the student. It is a place to which teachers and administrators can bring their technical problems and work out a solution under expert guidance, while enjoying the advantages of superior library facilities and the counsel of fellow educators with like problems. It is a situation in which people with definite problems organize to solve those problems under the leadership of experts and under their own steam. It is a device that will permit the development of the individual in intellect and personality; a protest against the weakness of the course as an educational technique which emphasizes content rather than personal development, non-functional content rather than functional content; compartmentalized experiences rather than integrated experiences. It is a setting in which a teacher can consider a problem in its entirety, not in unrelated partitions. It is the 'case method' that proved so effective in legal and medical training. It is a functional experience for teachers. It is growth in professional competency at its best."

As more and more youth with their many and varied interests present themselves at the doors of the secondary schools it is incumbent upon any society to motivate and lead them through as many and varied kinds of learning experiences as the understandings and arts of more fully qualified teachers can provide. Where such qualifications are deficient it is equally incumbent upon any society to see that its teachers are made equal to the challenge that confronts them. To reach such objectives and realize high standards, the workshop technique should be used as often as possible.

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—Editor

ROLE OF SEMINARS AND WORKSHOPS IN TEACHER EDUCATION

S. P. Mukherjee

> *One agency which has made extensive use of the seminar and workshop technique is the Extension Services Department whose success in.in-service programmes depends on the extent to which secondary school teachers are brought into the new ideas and approaches. Shri S.P. Mukerjee, Co-ordinator of the Extension Services Department, David Hare Training College, Calcutta, describes in this article his observations on the role of seminars and workshops, the results that they yield and possible ways of making them more effective.* —Editor.

The teaching of children whether at the primary, secondary or higher secondary stage has always been a difficult task. Young learners come to school with many different ideas imbibed under changing social conditions. The lack of homogeneity in the mental make-up of the modern young boy or girl has in itself become a major problem to teachers. Individual efforts are hardly adequate to solve this problem. Psychologists and educationists have been devising different methods of teaching to cope with the situation. Bold and novel methods have been experimented upon in the progressive countries of the West and have yielded no small results. The seminar and workshop method of learning seems to be one of the important and more successful methods of achieving a better form of learning and a more satisfying form of teaching.

In this country seminars and workshops have come into the educational system comparatively recently. The Departments of Extension Services which have been functioning in the different states during the past four years have adopted the method of seminar and workshop on a large scale, the material and resources available to them having facilitated experimentation with a fair amount of freedom and independence. The results that have been achieved so far, while not without these problems and difficulties, are quite encouraging. There is every reason to expect that as we gain more experience in this new method we shall learn to remove whatever obstacles have impaired its efficiency and to make what adjustments are required to adapt it to the social, economic and other conditions prevailing in our schools.

Principles and Purposes of Seminars

In the traditional method of holding teachers' conferences it was the practice that some experts delivered a series of lectures while the trainees merely listened and received whatever was given to them. In the seminar and workshop on the contrary, the entire course is run on the principle of mutual co-operation and understanding. The topic is chosen generally by the organisers of the seminar, a certain number of teachers, say 25 to 40, is invited to form a group, the Director introduces the subject to the participants, splits up major problems into a number of sub-topics which are then taken up by the participants in suitable sub-groups according to their special inclinations. Each group usually consists of 5 to 8 participants and works under the guidance of a resource person. Participants hold discussions among themselves and try to reach conclusions in their search for a solution to the particular problem which they have taken up for consideration. A library of relevant books, periodicals, journals and other reference material is placed at their disposal for use during the seminar. In addition, the Director may prepare a bibliography in consultation with the resource persons. Through free and frank discussions the participants draw richly from each other's experiences in the school and the classroom, each member contributing his share to the formulation of conclusions and decisions. Finally the recorders of the different groups then prepare their reports on the findings. The reports of all the groups are presented at a plenary session of the seminar which discusses the various recommendations and formulates the final resolutions based on which the participants are expected to work out new methods in their own spheres.

Although there is some analogy in the procedure of work followed in an industrial workshop and in an educational workshop, it is obvious that the similarity is only superficial and the nature of work in the two are far from being identical. In an industrial workshop products and results are the outcomes of the mechanical efforts of artisans assigned to work for a common purpose. In an educational workshop on the other hand, educationists work together on an academic problem to arrive at a solution not by mechanical processes but by concerted intellectual efforts. For, the idea of a workshop is "to place responsibility for learning on the student—to develop self-confidence in his own learning ability in the process of group participation".

Evaluation of Seminars

In the light of what has been discussed above, it will not be out of place to evaluate the merits of seminars and locate their advantages over the ordinary courses and lectures. It has already been stated that in courses it is the knowledge and intellectural effort of one individual expert that is put to function, the participants being passive listeners, making very little contribution. In a seminar or workshop the knowledge and intellect of all the participants are

pooled together to work out a solution of the problem. The result is naturally more accurate and realistic being the resultant of the thought processes of a number of experienced minds.

In the past, teachers scarcely indicated the difficulties and handicaps which they experienced in the class room. They pursued a routine method which neither inspired the learners nor brought satisfaction to themselves. But when they are invited to a seminar or workshop, the same teachers become different individuals. The barrier of isolation is lifted, they come forward with their experiences, thoughts and judgements in their search for solution to the problems which had so long troubled them but for which they had not thought it possible to find an answer. Thus the seminar gives an impetus to the enterprising teacher who is made to feel that he has his own share to contribute to the formulation of practical solutions which will improve methods not only in his own school but elsewhere also. His pride in his own achievement increases and makes his work more interesting.

Another valuable result which the seminar yields is that it affords the individual teacher an opportunity for expression of his intellectual faculties which generally lie more or less dormant and suppressed within him. Teachers are eager to occupy a position of responsibility in the system of learning and teaching. Through independent thinking they are helped to develop a confident personality and improved morale. Properly used, seminars will remove the complex under which the teachers have been so long suffering and will give them a more positive zest for work. Moreover, seminars also enable teachers to better evaluate their own efforts and revise their procedures and methods in the class-room. In a spirit of co-operation and mutual understanding, they evolve improved teaching methods thus resulting ultimately in better equipped teachers and better results.

A seminar has an added advantage that it can be undertaken within a short period of time and without disturbing the routine work of a school seriously. The process of division of labour through which the seminar functions helps quicker decision and a brisker pace of work.

Some Suggestions

In the brief period in which the seminar method has been tried in the country, it has proved its undoubted worth. However, there is considerable scope for improving its organisation and procedure so that the desired effect is more fully achieved. If, for instance school managers are convinced of the utility of seminars and workshops it would create a more congenial atmosphere and results would certainly be of a higher order. At present, the work of a seminar or workshop seems to close as soon as its findings are transferred to print in the report and distributed to the participants. But the real function of a seminar starts just at this point. The solutions to problems worked out at seminars are meant not to be locked up in reports but to be applied in practice by the participating

teachers in their class rooms. In actual practice, however, due to various tangible and intangible reasons, the seminarists seem to lose their enthusiasm for the new idea once they leave the seminar. School authorities do not always look upon any new device with confidence, and do not lend necessary support to the teacher who wishes to adventure out into unknown paths. Also new methods require better equipment sometimes greater financial aid and additional labour and energy. These facilities are not always forthcoming in the conditions under which our secondary schools function. These and other factors thus contribute to that position where the findings of a seminar survive as a mere printed document.

The Follow-up Work

To remove this defect it is necessary to follow up seminars with suitable continuity measures. There are several ways in which this can be done. The Director of the seminar or resource person may visit the schools from which teachers were drawn, study their difficulties in implementing its findings, give guidance wherever possible, or if the difficulties are of a more administrative nature, meet the headmasters or managers concerned and impress upon them the advantages and far-reaching benefits of the new practices. Visits to the schools by the Co-ordinators will also serve the same purpose. Teachers making experiments should be encouraged and their work should be recognised not only by the school but by State educational authorities also.

Precautions

There are certain precautions which have to be taken in the organisation of a seminar or workshop. In the first place the session should be short enough not to impair the regular work of the school. Participants should not be more than 20 or 25 and during the course of the seminar it will be to the advantage of the discussions if they reside together. This will facilitate co-ordination of work. The Director should be on guard to see that the programme of the seminar is varied enough to keep the participants interested throughout. Healthy recreational programmes will add considerably to the interest value of the seminars.

Seminars and workshops have so far been confined to the larger cities and not much has been known about their value in the mufassal areas. There is. therefore, great need for popularizing method among the teachers all over a state. Decentralization of the system will be an effective device to achieve this purpose. Seminars and workshops should be organised on a zonal basis and receive guidance from the Co-ordinators.

There is another point of importance that contributes significantly to the success of a seminar. Usually the subject is chosen by the organisers themselves and the participants are asked to work on it. If on the other hand the choice of the subject is made to arise out of the local needs and interests of the participants, it is bound to draw greater enthusiasm and interest in the discussions. The Director of the

seminar may invite subjects from teachers and schools and select those which are demanded by the larger number of teachers.

In conclusion the seminar and workshop method has great potential as an instrument of improving teacher competency. A great deal more of study has to be made of this new idea in the field of education. This is an aspect of in-service training which may be taken up for a careful and analytical study by Extension Services Departments and Teacher Training Colleges.

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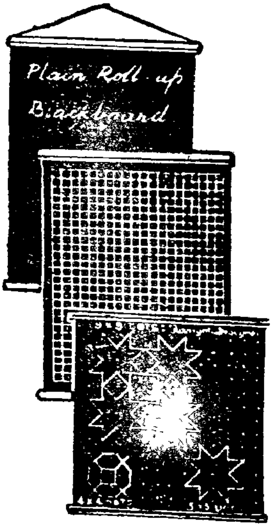

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SUGGESTIONS FOR THE IMPROVEMENT OF SEMINARS AND WORKSHOPS

Zohra Begum

Mrs. Zohra Begum is the Principal and Honorary Director of the Extension Services Department at the Osmania College, Hyderabad. Based on her personal experience of organising seminars and workshops, she makes an evaluation in this article of these forms of in-service training. She suggests several remedies for improving the technique, laying particular stress on the need for better planning, a more practicable selection of subjects and a constant evaluation of results. —Editor

In more recent times, seminars and workshops in the field of education are taking the place of the traditional type of conferences. While the spirit underlying both is the same, there is a shift of emphasis from mass gatherings where a few individuals conduct the proceedings and the majority are passive listeners, to more compact and active groups where individuals work together in an informal atmosphere on a common problem of current importance. The practical implications of the deliberations at seminars and workshops may, therefore, be regarded as more tangible, if more exacting. In the paragraphs that follow a few suggestions are offered whereby participants and their colleagues may derive more substantial benefit from these gatherings.

Selection of Problems

Since the nature of work and discussions at these meetings is to have a direct bearing on educational practices, the selection of subject for a seminar or workshop is an important step. The following suggestions may be of value in making a worthwhile choice :

(1) The problems selected should fall under certain well-defined classification of school and class-room needs such as academic, administrative, supervisory, disciplinary, remedial, organisational, financial and so on.

(2) Participants should be required to formulate their pressing needs in advance, an analysis of which should then be carried out in order to arrive at the greatest common factor for detailed consideration.

(3) Participants should come

reasonably clear in their minds regarding the details which they wish to be worked out at the seminar.

(4) The importance of having a clear understanding of what to pursue or practise should be stressed from the very commencement.

(5) There should be a clear determination regarding the follow-up survey and evaluation of previously formulated plans.

(6) Participants should be made aware that implementation of deliberations is as important as the discussions themselves.

The Present Situation

The above conditions are only partially fulfilled in many cases at present. For instance, the problems selected are too often mixed up with an ambitious plan to survey several other areas also. Seminars and workshops on examination and evaluation have been happy exceptions. But even here, the analysis of the needs of participants tends to be a passive process. The participants do not feel it their duty to come prepared in advance with a working scheme. Again, an understanding of the follow-up nature of work is generally not worked out and the participants do not assume responsibility of implementing the decisions, considering it to be the duty of other agencies. Participation at the seminar seems to them to constitute sufficient contribution in itself with no further obligation involved in it. This is largely because teachers do not come into the picture while the details of seminars or workshops are initially worked out.

Suggestions for Improvement

The situation could be improved by the following steps :

(1) The planning of these meetings should be decentralised. School-wise reforms planned within the narrow limits of problems are likely to yield better results than discussion of issues on a broad region-wise or all-India basis. A reform starting at smaller centres and with local problems will create a sense of importance among the individual schools or administrative units and once generated, might be extended to a consideration of the general validity of the problems.

(2) It is necessary to provide opportunities to participants to take stock of their achievement every now and then and revise their plans in the light of their experiences. Such a procedure is especially desirable in the academic and administrative fields pertaining to the day-to-day duties of teacher participants. The same participants should preferably come together again and again as often as possible and complete their plans or investigations in a compact area, instead of throwing the matter open to new members every time. A co-operative approach to educational problems will be fostered by this procedure. While continuity of this kind is preserved to a fair extent in respect of administrative personnel, it tends to be neglected in programmes concerning teachers so that they are not involved as much as they should be.

(3) In seminars or workshops dealing with academic and methodological issues such as the *teaching of*

different subjects, revision of curricula, introduction of evaluation techniques, reform of home examinations, developing experimental projects in schools, in-service training etc., it is desirable and even essential to involve heads of institutions also along with teacher participants so that the deliberations might receive responsible considerations at the follow-up stages. When heads of schools are kept out of the picture, implementation of decisions or proposals are likely to be delayed and even lost.

(4) Similarly, seminars dealing with administrative problems should involve those administrators who will help in implementing the suggestions in actual practice. A seminar where inspectors and the heads of schools in their jurisidiction participate together would have greater possiblities of practical implementation in the follow-up stages. Such an arrangement will develop a co-operative and democratic approach to educational discussions and will be supported if the seminars or workshops are conducted in compact and homogeneous spheres.

(5) The question of an optimum duration for seminars and workshops also deserves careful consideration. Generally it is more advantageous to plan for shorter courses rather than for longer ones. A four-day period should be adequate when persons in the group bring similar experiences covering a limited range of problems.

(6) From this flows the corollary—that it would be preferable to hold seminars on a pointed problem rather than on an extensive and diffuse one. A seminar at which a large number of participants gather together to discuss an area extending over several different aspects necessarily breaks up the seminar into groups, often according to chance factors. The deliberations arrived at in the respective subject groups are made available to others at a general session, and the approval is more or less a formality of procedure than informed acceptance. In actual fact only about seven or eight participants would have been able to give their active thought to the subject, and this defeats the very purpose of a seminar. If on the other hand, a single problem, or where the problem is complex, a convenient aspect of it, is taken up for consideration and is thrashed out thoroughly at successive seminars or workshops, it is bound to benefit a larger cross-section of teacher participants.

(7) The follow-up aspect of seminars etc., is a task of great importance and the one that remains to be carefully studied and organised. We have at present no way of assessing how far teachers actually implement, experiment or even continue to think along the deliberations of seminars or workshops. Perhaps setting narrower and more tangible limits to our aims and goals at seminars, would allow greater scope for follow-up and remedial procedures.

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HOW A SEMINAR ENRICHED SCHOOL LIFE

Banerji

A perceptible result of the various types of in-service programme organised during recent years has been to stimulate teachers to adopt an experimental approach to classroom methods. Miss Banerji, Principal of a girls'...............high school in Calcutta, is one of those participants who after attending a seminar felt a similar urge to try out new slants in teaching techniques. She describes in this article how her participation in a seminar contributed to an enriched school life.

—Editor.

My first Seminar

Participating in the Headmasters' Seminar at Darjeeling was a great experience. I had been trying to lift my school from the rut of the old trodden path. I had introduced the house system, the school uniform, compulsory tiffin, the school magazine, the weekly bulletin board and a number of similar features in the hope of improving the school tone. Now the Headmasters' Seminar opened up a new horizon for me, and I saw how much more could be done and was being done by teachers in other schools. On my return from the seminar, I tried newer and more varied measures to enrich the school life and to improve teaching.

Then in 1957 came the call to join the Headmasters' Workshop where we were expected to describe the experimental projects which we had undertaken as a result of the earlier seminar. I was at a loss ; experimental project, I had imagined, was research work, which meant laboratory controlled situations and highly trained research specialists, neither of which our school had. We had been trying out new methods in our own way and we did believe they improved our work but our only means of evaluating the worth of our efforts was to discuss them among ourselves at our staff-meetings and ask ourselves whether they had been useful or not. Sometimes there was difference of opinion and at others there was unanimous agreement that these efforts had been worthwhile. These conclusions were, however, what we *knew* and *felt* ; but we could not analyse our conclusions or support them by figures and statistical data. Dr. Griffin, the T.C.M. Consultant from the Council, came to our help. He clarified our ideas of projects ; he explained that they need not be confined to orthodox educational experiments which required elaborate planning, execution and evaluation,

What was of greater importance was that each project should have clear objectives, definite procedures and carefully observed results. What had been the state of things before the project and what was the change after it should be carefully watched and recorded.

Since then we have had the courage to call our efforts 'projects', but I think our aims are in many cases confused, the procedure not quite consistent with our aims and the method of evaluation is still the same old way of voting ourselves. The reason for this is largely that we have had little or no guidance in the matter. Recently, however, I came across a book, "Action research to improve school practices" by Stephen M. Corey. It appears to be the kind of book I was looking for and perhaps with its help I shall be able to formulate more pointed and purposeful schemes and arrive at more tangible results. Let me now describe a few "projects" that have been tried in our school.

Reform of Examination

As our teaching is dominated by examinations, our aim was to improve it so that our teaching may also be improved. What we aimed at was to prevent cramming and to test only useful knowledge, which when retained would be helpful to the students in prosecuting their future studies in the subject. In the lower classes we had a further aim—to test the pupil's knowledge with the least physical strain of writing. Oral tests were administered but it was not possible to test the whole class exhaustively by that method. At first 40 per cent of the marks used to be allotted to the new type of questions and 60 per cent to the essay type. In the lower classes the distribution between these two types was 50 : 50. We have subsequently modified the allotment of marks in the higher classes and made it 30 : 70.

After every examination we make a careful scrutiny of our questions. Senior subject teachers are made responsible for the work. The defects and remedies are discussed at group meetings of subject teachers. The questions are now much better framed than they used to be before and have even served as models for some of the neighbouring schools. The percentage of pass has increased especially in the lower classes, nor have the new type tests affected our results in the final public examination, as was feared by some.

Subject Teachers' Meetings

Subject teachers' meetings help to clarify methods, to remove confusion due to inadequate knowlege of content, to detect the defects in teaching and evaluation and to suggest remedies. These meetings are generally held once a month in subjects like English, Bengali and mathematics, and twice or thrice a year in the other subjects. The meetings are held during school hours, necessary adjustments being made in the time-table to keep teachers concerned to attend them. The general opinion among the teachers is that these meetings have been very useful to them professionally.

Improvement in Teaching Spelling

As the spelling of pupils was far from satisfactory, the following steps were taken to improve it.

About fifteen minutes were devoted twice a week to teach spelling in English and Bengali in all classes up to the eighth. Lists were made of the difficult and the most commonly mis-spelt words of not only the language classes but of other subjects such as history, geography, and science also, and the correct forms were drilled. Spelling tests were held from time to time. In addition, ten marks were allotted for spelling in the periodical tests and annual examinations and this proved to be a great incentive in making pupils learn spelling. All these efforts together helped to reduce the number of spelling mistakes to a great extent.

Student Clubs

Clubs were first started about two years before the introduction of diversified courses, with the aim of enriching pupils' activities in science. languages, hand-work and games. After the coming in of diversified courses, music and gardening clubs have been added, and we expect that the clubs would also enable us to find out and develop the interest of the girls. How far they will meet our expectations remains to be seen.

Conclusion

Education has been described as he intelligent adjustment of an individual to his environment. In an age when changes in the physical and social environment are taking place at a stupendous pace it becomes more than a mere necessity that the young be prepared through education to keep abreast of these changes. In such a growing, developing and adjusting education, the useful has to be retained and the not-so-useful discarded in a continuous and thought-out manner. Our schools cannot, therefore, sustain the life which they are expected to nourish and develop unless they periodically examine their own methods, improve and stablise those practices which are required to meet the challenge of modern life and courageously give up those that have served out their purpose. Seminars and workshops are invaluable means by which schools and teachers can subject themselves to this kind of healthy self-analysis.

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INTRODUCING BOOKS ON EVALUATION

In this issue we introduce our readers to the third in the series of books on evaluation. The choice this time is "Measuring Educational Achievement" by W.J. Michaels and M.R. Karnes. Shri T.S. Mehta, Evaluation Officer of the Directorate is the author of the digest.—Editor.

Measuring Educational Achievement : by W. J. Michaels, Ph. D , Professor of Industrial Education : University of Minnesota and M. R. Karnes, Ph. D., Associate Professor of Education—Universityof Illi: McGraw Hill Book Company, New York.—1950.

"The overall purpose of evaluation is to improve the instruction that is being given. An instrument of evaluation will be of little use unless it aids in such improvement." These lines from the authors aptly describe the central theme of the book. Evaluation is not an end itself but a potent means to an end, is what the authors have tried to emphasise throughout and never for a moment do they lose sight of the integral relationship between evaluation and instruction. Even while dealing with the different aspects of test construction they reiterate that "tests should aid in the improvement of instruction. This is the first use of the test and the most important one."

It is for this reason that the authors at the very outset make a distinction between "measurement" which implies a mere placing of precise quantitative value on an outcome of instruction and the newer concept of "evaluation" which signifies a continuous process of valuing student progress and which is an integral part of the whole educational process. Evaluation according to them is comprehensive in nature and includes all types of measuring instruments together with the exercise of judgment. Citing Wrightstone's definition, they contend that "evaluation is a term that designates a more comprehensive concept of measurement than is implied in conventional tests and examinations". In terms of teaching efforts, evaluation brings in the consideration of the many factors that are inherent in student growth—namely, proper attitudes

towards others, safety habits, manipulative skills, acquisition of knowledge, appreciation, understandings and the like.

With this distinction in view a major chapter is devoted to a lucid discussion of the purposes of evaluation, as a comprehensive concept of measurement. This chapter deals with the first fundamental step of measurement, namely, "why and what to measure". The authors ably bring out the prime necessity of a clear cut understanding of this step on the part of the test constructor before he could do a good job. The several uses of tests and other evaluation tools are detailed in this chapter under the headings—administrative uses of tests, supervisory uses of tests, tests in a guidance programme, tests for curriculum development, tests in research and tests as aids to improvement of instruction.

In describing the several uses for tests in teaching-learning situations as well as in the other activities of the scho l, the emphasis is on the implications for class room teachers. The point of emphasis is that any evaluating instrument, if it is to be of any value, must aid in the work of the school. There is no purpose in giving a test unless constructive use is made of its results, and this is possible only when each item reflects what it is endeavouring to measure. From this point we are led to the next vital question of "what to measure" and a discussion of course objectives which are directly reflected in any good programme of measurement. Specific objectives of instruction are expressed in terms of desirable skills, understandings and attitudes to be acquired by the student. Measuring and evaluating devices are to be designed to determine the extent to which these objectives are being realized. Summing up, the authors say, "In the simplest possible terms this means that before you can do very much about making good tests you must know why you are teaching the course and what you expect the student to get out of it. Before a successful test can be constructed the test maker must be able to answer the question, "Just what am I trying to measure ?"

The next two chapters are devoted to the second fundamental step of measurement, "how to measure," and a very full treatment is given to the 'how' of making tests and other instruments. General principles of test construction, more particulary of the achievement test type, the characteristics of a good test such as validity, reliability and objectivity, are dealt with in simple straightforward language.

In chapters VI and VII the book presents a wide variety of measuring and evaluation devices of different types in relationship to learning outcomes. For the purpose of discussion sample test items are classified under five main headings each with its adaptations and modifications--multiple choice, true-false, matching, recall, and miscellaneous. One chapter is devoted to each type and provides detailed information to the practising teacher on construction, purification

and uses of each type of test in relation to the measuring of specific pupil behaviours and more particularly the ability to apply. things learned. These illustrative test items are drawn from various sources. such as class room tests, books, journals and standardized tests. They are representatives of the techniques used in evaluating a variety of outcomes pertaining to different subject areas.

'Observation' as a technique of evaluation, its importance in such subject-matter areas as practical arts and vocational fields, and various devices to make it objective, are dealt with in a separate chapter.

At various places throughout the book the authors emphasise the necessity for studying the results of tests in order to make instruction more effective, for thereby does the teacher gain a fairly accurate picture of the way in which students learn, the relative effectiveness of the various methods of teaching, and the strength and weekness of particular patterns. of the curriculum. Test data are therefore to be carefully handled. Two major chapters towards the end are devoted to the methods of interpreting the test data and analysing and improving tests. Elementary statistical procedures for systematising and making comparisons within and between groups of test scores will be of benefit to the uninitiated teacher.

This brings us to the last chapter "Improving your instruction—A challenge". The authors have aptly called it "the 'so what' part of the book." The chapter provides several suggestions about using test results for making a better job of teaching and bringing about better student growth. The book will be of immense value to all practising teachers who are interested in their own professional growth and in making teaching a worthwhile job.

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Reviews

Educational Charts in Science :

Coloured wall charts on Human Body—For class-room education by Messrs Universal Educational Films, Post Box No: 567, 3-A, Asaf Ali Road, New Delhi.

Produced in Germany this set of four large—size, multi-coloured charts depicts the following parts of the human anatomy.

1. Cells and Cellular Tissues ;
2. Endocrine Glands (Internal secretion)
3. Urinary Apparatus ;
4. Maturation of Ovum.

The chart on 'Cells and Cellular Tissues' depicts a general structure of a cell, along with nine other kinds of cells with their typical shape and structure according to their specific functions in building the different organs of the human body. The exposition is clear and indicates even minute details in multi-colours. It is bound to help the teacher and the taught in developing a clear concept of cells and tissues. Beautifully illustrated, the chart will arouse interest in pupils for the subject.

The chart on 'Endocrine Glands' is also equally vivid and impressive. The pineal body, the pituitary body, thyroid and parathyroid glands, thymus, suprarenal gland, islands of langerhans, ovary and testes are the nine glands shown in the picture. The pictorial representation of the glands will help pupils locate their positions in the human body. The structure of these glands is shown separately. This helps in making a comparative study. Accurately planned and carefully printed, this chart will prove instructive and educative to the secondary school pupils studying physiology-hygiene.

The other two charts pertain to the reproductive system of the human body. The one on 'Urinary Apparatus' is divided into various sections Section A vivifies the portion of the urinary organs The longitudinal sections through the kidney and also through the pelvis of the kidney are shown in B and C. Section D shows the structure of the kidney along with the diagram of Malpighian Corpuscle. In addition, there are four other diagrams showing sections and structures of the different parts of the apparatus The chart on 'Maturation of Ovum' may be considered as a continuation of the one on the 'Urinary Apparatus' It illustrates the scheme of indirect cell-division and maturation of sperm and ovum.

All these charts are highly impressive and instructive and will provide effective visual experiences to the students of physiology and hygiene or biology in the high schools and higher secondary schools. The visual aspect of the charts is maintained by the minimum use of verbal description and this is a feature that calls for special commendation. It would, however, serve as a more valuable aid if the charts are accompanied by guide-books giving instructions to teachers for their effective use in class-room teaching.

The price of each chart is quoted at Rs. 15.50 nP (P & F, postage and Sales-tax extra). This seems to be somewhat higher compared with the prices of human torsoes which serve as a better aid to the teaching of human physiology.

—B.V B. and R.H.D.

English for To-day, Janet Scobie and W.O. Williams : Pp. : 160, George Allen and Unwin Ltd., London.

This delightfully concise book has been written for foreign students of English, with the idea of making them feel quite at home with the language and of helping them to express themselves clearly in correct, well organised English

The book devotes almost half of its content to the treatment of the essay and then passes on to other forms of composition such as the precis, letters, interpretation and the general ability to handle the English language.

Originality of thought and expression, paragraphing, choice of striking beginning sentences and vocabulary, grammar and usage—all these receive detailed treatment. The exhaustive and graded exercises under each chapter highlight the mistakes most committed by foreign students and indicate how to remedy such defects

Teachers who feel lost in helping their students to write a good precis will find valuable practical hints for the purpose.

The specimen tests included in the book should be of interest to any examiner in English although it is clear that the authors wish primarily to assist students to pass the English examinations conducted by the Cambridge University.

To say all this does not mean, however, that the book will be useful to the average Indian student of English in our secondary schools. The book will at best serve as one more useful guide to the teacher of English in our high schools and nothing more

A.S.D.

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(Signature of Publisher)

New Delhi
30th March 1960

Editorial

If any system of examination is to be effective, it must assess the progress of pupils in two directions—in the acquisition of knowledge and skills and in the modification of behaviour. There is much room for improvement in both these directions in the present system of examination in this country.

The Ministry of Education set about the task of initiating a long-range programme to make the examination a more valid test of the abilities and all-round achievements of the pupils, A ten-year programme of reform was formulated under the guidance of Dr. Benjamin S. Bloom, a specialist on Examinations from the University of Chicago. An Examination Unit was set up at the Centre two years ago and 15 officers were trained in the evaluation techniques to man it. It was hoped that within ten years, teachers throughout the country would be made familiar with the evaluation procedures, and would implement them in their class-room teaching. In-service training would be given to teachers for this purpose so that they would learn to look upon examinations as an instrument not only of testing but also of refining teaching practices.

Since the programme was initiated, the Central Examination Unit has conducted a number of evaluation workshops at state and regional levels for teachers in secondary schools, and introduced through them, the new approach towards examinations. This integrated approach is based upon the concept of education as a total process, and upon the idea that examinations, if properly devised, become very effective means of improving the methods of teaching as well as of testing learning. It seeks not only to improve the reform of written examinations but also helps the teachers to re-think about the fundamental objectives of examination in each subject of the curriculum ; in turn, the objectives determine the methods of teaching. It provides the teacher with a clear statement of behaviour changes expected in pupils as a result of their having studied a particular subject.

A very practical outcome of these workshops is the pool of test material that has been prepared by the participants. It will be edited and supplied to the Examination Boards so that they may introduce the new type of test in their internal examinations. The Examination Unit has also produced brochures on evaluation in Education, in Social Studies and in General Science.

The Central Examination Unit has, therefore, begun to implement one aspect of the reforms envisaged by the Ministry of Education but ultimately it is the state-level agencies that can undertake to spread these new techniques of evaluation in their secondary schools. Steps have already been taken towards the establishment of State Evaluation Units under the Third Five Year Plan. The organisation of the State Units will take time; meanwhile the Ministry of Education felt that it would be worthwhile to undertake a training programme so that by the beginning of the Third Plan, trained state personnel will be available to man the State Units.

Accordingly, a five-week Training Course in Evaluation, attended by 26 senior officials from the States, was organised by the DEPSE and was held at the Central Institute of Education, Delhi in September. It was directed by Shri A.P. Srivastava, Sectretary, Bihar School Examination Board, Patna. Dr. Fletcher, T.C.M. Consultant for Examinations, and the Evaluation Officers attached to the Directorate of Extension Programmes for Secondary Education, participated in the course as resource personnel. The programme covered during the five weeks included a study of the concept and the technique of educational evaluation; the development of test materials; the planning, preparation, administration, scoring and standardisation of tests; internal assessment and its implications, training programmes in evaluation and the setting up of state evaluation units, their functions and organisation.

The Minister for Education, Dr. Shrimali. in his valedictory address to the participants of the course advised them "to be careful to take into consideration the mental equipment of the teacher, his ability to grasp the new concepts and techniques and the environment in which he moves and functions," if they wish to make headway in this reform. He stated that "planning to be successful, should start in the classroom and not at the top......In our country the most urgent need is to improve classroom teaching. I am glad to observe that the examination reform which you have undertaken adopts this integral approach."

EXTENSION SERVICES NEWSLETTER

The reports received for April and May are being included in this combined newsletter. Most of the Co-ordinators from the North-western and Eastern zones were busy during May attending the training course in the use of audio-visual equipment, held, at the National Institute of Audio-Visual Education, New Delhi, and therefore, only a few reports were received for this period.

A seminar on the "Improvement of Hand-writing of school children in English" was organised by the *Extension Services Department of the Central Institute of Education, Delhi,* under the direction of Dr. (Mrs.) M. Koshy, Vice-Principal of the Institute. Thirty-eight participants attended the seminar. Another seminar on the "Effective Use of Bulletin Boards" was conducted under the direction of Dr. E.A. Pires, Principal of the Institute, Prof. J.M. Ure, Education Officer, British Council, conducted a short course on the "Teaching of English Pronunciation" and later addressed 100 teachers of the Teachers' Study Circle on the "Teaching of English to Beginners." Dr. J.M. Norton, Visiting Professor from Columbia University, addressed the Teachers' Study Circle at the Central Institute of Education on "Similarities and Differences of Secondary Education in U.S.A. and India." The activities of the Department for the coming session were discussed at a meeting of the principals of participating schools. A three-day Seminar for 12 teachers on Geography and a twelve-day seminar for the principals of local schools were organised during May. Twenty-four principals discussed parent-teacher co-operation, improvement of social relationships in schools, organisation of the school for effective learning and organisation of hobby clubs. Books were loaned to five schools.

The Director and the Co-ordinator of *the Extension Services Department, Patiala,* spoke on "Student Problems" at a meeting of the Study Circle in Ambala Cantonment. The talk was followed by a discussion. A seminar on "Teaching of Mathematics" was organised by the Department. Twenty-six persons attended. The Co-ordinater visited Kakrala, Samana, Sangrur and other schools and discussed their educational problems with headmasters and teachers. Library and audio-visual services continued as usual.

The Department of Extension Services, Chandigarh, organised a two-day seminar on the "Teaching of Economics" when the participants discussed the recently introduced syllabus in Economics in higher secondary schools. At a one-day seminar on "Physical Education in Schools," participants discussed the recently introduced "Efficiency Star movement" and decided to maintain efficiency records of all pupils in various games and athletics. A one-day seminar on "School Reading Room" brought out several recommendations for the better use of books and journals. A meeting of the heads of local schools discussed the formation of the "Teachers' Club" and appointed a sub-committee to work out details. The use of bulletin boards was one of the subjects of discussion at the monthly meeting of the Chandigarh Teachers' Association.

A one-day seminar on "Cumulative Record Cards" was organised by the *Extension Services Department, Jullundur.* The cumulative record card designed by the Extension Centre was discussed in detail. Forty-two teachers participated in a conference of teachers of high and higher secondary schools of Gurdaspur and formulated a plan of work for the new session. At a meeting of the Jullundur Science Teachers' Association, the programme of activities for the current year was discussed in detail. The Department has drawn up a plan for initiating a number of experimental projects in the associated schools. These include maintenance of cumulative record cards, organisation of guidance services, developing reading habits among pupils, beautifying the schools and the use of objective-type tests.

Northern Zone

The Department of Extension Services, Isabella Thoburn College, Lucknow, carried out work on fluency practice and correction of speech with the help of the tape-recorder. After the workshop in library science, the Co-ordinator was invited to help in organising libraries in two participating schools. The Department also organised an evening workshop for teacher-trainees in the use of audio-visual apparatus. A display of teaching and learning aids was organised, during which emphasis was laid on the use of bnlletin boards. The executive of the Advisory Committee met and made several suggestions for new activities among which one was that more emphasis should be placed on the teaching of Mathematics, Hindi and English. It was also suggested that plans should be made for the improvement of the standard of physical education in schools.

Sixty teachers of the junior high schools attended a two-day camp organised by the *Department of Extension Services, Government Central Pedagogical Institute, Allahabad,* when the participants discussed their

problems in the teaching of social studies, general science and Hindi. The occasion was used to demonstrate the use and construction of cheap and useful improvised teaching aids. A meeting of the principals of associated schools held during the month reviewed the year's work and planned the programme of activities for the summer vacation. A club was started for the teachers of Geography. The Co-ordinator visited seven schools during the month and discussed different problems with the members of the staff. A science exhibition was set up in the Science Laboratory of the Pedagogical Institute. A special feature of the exhibition was the display of improvised apparatus and books.

A short-term course in poster-making and printing by the silk-screen was arranged by the *Extension Services Department, Aligarh.* The course which was conducted by Mr. Dilip Bakshi, Chief Artist of the National Institute of Audio-Visual Education, New Delhi, was attended by 23 teachers of Aligarh, Bulandshahar, Etah and Mathura districts. The participants were divided into three groups for Geography, Art and general subjects and the participating teachers produced a large amount of valuable material on different subjects.

The Co-ordinator of *the Department of Extension Services*, Jabalpur, visited the Government Higher Secondary School, Patan, and addressed the staff of the school and arranged for showing educational films in the institution. The Department also co-operated with Navin Vidya Bhawan Jabalpur, in the organisation of an educational week during which lectures, dramas study circles etc. were arranged. The Department arranged nine film-shows during the month.

Eastern Zone

A week-end course on Improving English and a Summer Course on Economics and Civics were organised by *the Department of Extension Services, Shantiniketan, West Bengal.* The first was attended by 23 teachers who discussed the limitations of the prevalent system of education and were instructed in the new techniques of evaluation. They also discussed how to construct tests in a few selected topics. In the Summer Course the participants discussed the salient features of the higher secondary examination syllabus from the pedagogic point of view. Also in group meetings they discussed the re-organisation of this syllabus with the purpose of improving instruction, planning of lessons, preparation of visual aids and the construction of achievement tests of the objective type. Another course of Psychology including laboratory practice, directed by Shri G.P. Kapat, Senior Lecturer in Psychology, Calcutta University, was organised by the Department. The advisory committee of the department met and discussed the programme of follow-up, intensive work, promotion of

research and experimentation in schools. The Co-ordinator visted several schools in this connection and spoke on the reform of secondary education, the causes of indiscipline among pupils and the details of the intensive work programme planned for the year. During May, 11 films were shown in schools. Library and audio-visual services continued as usual during this period.

The Department of Extension Services, Patna, arranged a symposium at the Patna City School on "Developing Power of Expression of Students." The discussion was initiated by the Honorary Director of the Department. The Co-ordinator visited 5 schools and discussed with their staff the structural approach to the teaching of English and the new techniques of assessment of students' work.

The advisory committee of the Extension Department, Hooghly, drew up a programme of activities for the Department for the current year. A ten-day subject teachers seminar on "Psychology" organised under the joint auspices of this Directorate and the State Directorate of Education, West Bengal, ended on the 8th April, 1960. The seminar considered specific problems connected with the teaching of the subject, listed experiments which should be undertaken on the basis of the syllabus of the higher secondary schools and discussed the preparation of suitable test material in the subject.

The Co-ordinator of the *Department of Extension Services, Institute of Education for Women, Alipur,* visited the schools to guide them in their experimental projects on Social Studies and English. He also assisted Dr. (Miss) I.R. Wells, T.C.M. Consultant from the Directorate in her work with the St. John Diocesan School. The lecture by Dr. Smart, a Fullbright scholar, at the "Physical and Mental Development of Adolescents" was another feature of the activities during this period.

The Co-ordinator of *the Extension Services Department, Bhagalpur,* visited seven schools, gave a demonstration lesson in English in class VII in one of them and discussed measures to improve classroom teaching in another.

The Department of Extension Services, David Hare Training College, Calcutta, organised a meeting of the Central Science Club at which the members discussed the work undertaken by them on the different projects. The Co-ordinator also assisted Mr. C.L. Sterling and Mr. M,K. Luther, T.C.M. Consultants from the Directorate, in their work with the R.K.M. High School, Narendrapur, and Dr. (Miss) I.R. Wells, in her work with the commerce class of Shri Maheshwari Vidyalaya.

The Co-ordinator of *the Department of Extension Services, Cuttack,* visited two schools during April. The library services of the Department were maintained as usual.

CENTRAL ZONE

During May Professor Marathe and the Co-ordinator, *Extension Services Department, Poona* visited the various schools at which short-term courses for secondary school teachers in the teaching of English were organised according to the scheme formulated by the Government of Maharashtra. The Co-ordinator discussed with the heads of seven schools the organisation of social studies clubs in their schools. The Department arranged film shows at four places during the month.

The Extension Services Department of the *Secondary Training College, Bombay* conducted an orientation course for instructors in English from the districts of Nasik, Thana, West Khandesh and East Khandesh. These participants were acquainted with the structural approach in the teaching of English. Mr. D.H. Spencer, Educational Officer of the British Council, acted as the Chief Consultant. A meeting of the Advisory Board of the Department was held during the month to plan the activities of the Department for the year.

A workshop for the training of group leaders was organised by the *Department of Extension Services, Ahmedabad.* Group discussion techniques were discussed. Another workshop was held for teachers who met to plan some activities that could be correlated with the implementation of the syllabus from the next academic year. In both these seminars, the principals and the senior teachers of the schools acted as resource personnel and the Co-ordinator as the process observer. The tape-recorders were utilised to disseminate valuable ideas contained in books written by eminent educationists. The Co-ordinator held a meeting at Limbsi, of 18 headmasters and discussed with them the planning of the work of the new session. He attended a meeting at Mehsana District Headmasters' Association, where some new activities were planned to be carried out with the assistance of the Extension Services Department.

The Extension Services Department, Kolhapur arranged guidance visits to 15 training centres organised by the Government of Maharashtra, for the teaching of English. The Co-ordinator and a member of the training college staff gave talks on the methods of teaching the subject, with the help of the tape-recorder and gramophone records. The Advisory Council of the Department for Ratnagiri District met during the month and outlined a tentative programme for the year.

The Honorary Director and the Co-ordinator of the *Extension Services Department, Warangal,* visited all the school examination centres and helped the heads of the institutions with guidance and advice in conducting the new type tests. The Co-ordinator, in his school visits, discussed the nature, scope and importance of inservice training activities

of the Department with the teachers of eight schools. He advised them to form study circles and science clubs and to start experimental projects. In May, he conducted a workshop on Social Studies and stressed its importance in the secondary school curriculum. The participants discussed the meaning and nature of Social Studies, its aims and objectives, its scope and its methods of teaching and evaluation. The library services of the Department were maintained as usual.

A seminar on the new syllabus in social studies for forms I and II in local schools was conducted by the Co-ordinator of the *Extension Services Department, Rajahmundry.* At the request of the participants, the syllabus for the two forms was analysed into teaching units; a list of practical activities to be taken up was prepared. The participants discussed the general principles on which the teaching of current events might be based. They drew up a list of technical terms which required explanation and prepared outlines of visual aids necessary for the teaching of thc subject. In May, the Department carried out preparatory work in connection with the seminar on the teaching of English and the course in Geography, to be held in June. The Co-ordinator discussed educational problems with the teachers of 11 schools which he visited.

SOUTHERN ZONE

The Honorary Director, the Co-ordinator of the Extension Services Department, Trivandrum, visited several schools during the month to discuss with the staff, various activities included in the programme of the Department in the current academic year. Foremost among the items discussed were experimental projects and week-end seminars. The Department conducted a refresher course in May on the structural approach to the teaching of English, with particular reference to the teaching of grammar and composition.

The Honorary Director of *the Extension Services Department, Trichur,* presiding over a meeting of the participating schools, surveyed the work done during the year and urged the teachers to use in the classroom the new methods and techniques learnt from seminars and refresher courses. He conducted a seminar on "Cumulative Record Cards" which was attended by 23 teachers; and a two day seminar, "Dynamism in Teaching" in which the 27 headmasters and teachers who attended, discussed the defects of the present day teaching methods and their remedies. Shri Krishna Iyer, Lecturer in Mathematics, Government Training College, Trichur, conducted a refresher course in "Measurement and Diagnosis." At another seminar conducted by the Department, 18 headmasters discussed the several organisational problems and subjects such as discipline in schools, parent teacher co-operation, co-curricular activities etc. A meeting

of the newly reconstituted Advisory Committee approved a draft programme of activities for the year, laying stress on intensive follow-up work.

At a meeting of the Advisory Board of the *Department of Extension Services, Kozhikode*, it was decided to pay special attention to the teaching of English, organisation of science clubs, use of audio-visual aids, preparation of learning experiences from the syllabus, diagnostic tests, remedial measures etc. in the programme of work for the year. Preparatory work in connection with the programme of intensive work in the Teaching of English was completed. Four schools have agreed to co-operate in this programme. In a seven-day workshop organised by the Department on the use of puppets in the teaching of languages, three scripts in English and two in Malayalam were prepared by the participants. The Co-ordinator also prepared some teaching aids, such as film strips and charts for use in the associated schools.

The Co-ordinator of *the Department of Extension Services, Annamalainagar*, visited a number of schools and discussed with the heads and teachers the planning and execution of worthwhile projects during the next academic session. He also visited schools in Tanjore District to organise a seminar for the headmasters and headmistresses of the secondary schools of the district during May. A four-day seminar on the teaching of social studies was conducted under the auspices of the Department. The participants discussed the objectives, content and teaching techniques and the new syllabus, the audio-visual aids to be used and the practical activities to be undertaken. The Department conducted a five-day seminar for heads of schools in this district at Kumbakonam. It was attended by 19 participants who discussed several school problems such as administration, improved techniques, evaluation and reform in Secondary Education. The Co-ordinator attended the State Education Conference at Madurai and participated in discussions on sections dealing with university education and teacher education.

The Extension Services Department, St. Christophers' Training College, Vepery, Madras, organised three seminars during this period. One was to study the new syllabus for social studies in Standard IX; the other two dealt with the methods of science teaching and the teaching of Social Studies in Standard VIII and IX. Dr. R. D. Miles, Fulibright Visiting Professer of the Madras University, inaugurating this seminar asked the teachers to bear in mind the three 'E's namely, 'Enthusiasm, Erudition and Energy'. The project method was emphasized in the discussion on the social studies syllabus. The Honorary Director delivered a lecture on "Activities in Social Studies," and Dr. (Miss) Iravathy, Principal, Queen Mary's College, spoke on the "Teaching of Geography." During the seminar on Science, the participants discussed the syllabus in detail and learnt how to make simple

apparatus for the teaching of topics in the subject. Talks were arranged during the seminar on "Metabolism" and on 'Scientific Attitudes and their Relation to Democracy" and the 'History of Chemistry'.

The Co-ordinator, Extension Services Department, Mangalore, visited high schools at Shimoga, Sringeri, Malladihalli and Chikmagalur and discussed the programme of workshops for teachers of Social Studies, General Science, General Mathematics and Kannada, with the help of headmasters and teachers of the schools. The Department organised four five-day workshops in these subjects, and 64 teachers drawn from the districts mentioned above, attended them. Similar workshops are being arranged for fresh batches of teachers in June.

The Co-ordinator of the *Extension Services Department, Madurai,* organised a five-day course on the Teaching of Tamil at which there were discussions on visual aids, evaluation etc. The Co-ordinator gave a demonstration lesson showing the use of the tape-recorder and the film in the teaching of language.

EXTENSION HIGHLIGHTS

Individual Needs

The Department of Extension Services, Shantiniketan, organised a meeting of the Teachers' Study Circle. The subject for the discussion was "how to complete the course of studies prescribed for the class and yet adapt the teaching to individual needs. and differences." The Co-ordinator who initiated the discussion, admitted that there was, generally speaking, an overcrowding of the curriculum and he referred to the findings of a group of educators who had examined the curriculum problem at a recent international session convened by UNESCO in Paris. The remedy, he pointed out, lay in shifting the emphasis from filling the basket of the mind to that of training the mind. Until that was understood, the only way to ease the load of instruction was (a) to map out the course in each subject into meaningful units, and (b) to split up each unit into 'minimum essentials' for all and 'maximum electives' for a few.

A Teacher Directs a Seminar

On the invitation of the Principal, Municipal Multipurpose Higher Secondary School, Seoni, *the Extension Services Department of the Prantiya Shikshan Mahavidyalaya, Jabalpur,* organised a ten-day seminar of multipurpose school teachers. A special feature of the seminar was that a senior and trained higher secondary school teacher of the same institution was appointed Director of the Seminar. The participants were invited to select the topics for study and discussion.. The topics so selected were

co-curricular activities, the teacher and his place in the new set-up and audio-visual aids in teaching. The Department provided books from its library for reference during the seminar.

First Prize

The Co-ordinator of *the Department of Extension Services, Thiagarajar College of Preceptors, Madurai,* organised an Educational Exhibition on the occasion of the Golden Jubilee of the Madras State Educational Conference held at Madurai. The Exhibition consisted of the following sections : audio-visual education, extension services, botany, zoology and school and central science clubs. About 2,000 teachers visited the exhibition. The Central Science Club of the Department received the first prize for the best exhibits.

Publications

April-May 1960

Name of the Institute	*Name of the Publication*
Prantiya Shikshan Mahavidyalaya, Jabalpur.	(1) A report of the State-Level Workshop of Headmasters and Educational Officers of M.P.
	(2) A report of the Conference of Science Club Sponsors from U.P. and M.P.
Government Training College, Hooghly (West Bengal).	(1) Library Service Bulletin No. 1 (Volume II).
	(2) A report of the Subject-teachers Seminar on Psychology.
Tilak College of Education, Poona.	(1) A report of the Workshop of Geography Teachers from Ahmednagar District.
	(2) A report of Workshop on Science Clubs for Science Teachers from High Schools of North Satara District.
	(3) A report of the Workshop for the Headmasters of Secondary Schools from Poona District.
	(4) A report of the Orientation Course for Instructors in

	English for secondary school teachers from Poona, Ahmednagar, North Satara and Sholapur Districts.
R.N. Training College, Cuttack.	(1) The Annual Report of the Department. (2) A report of the Refresher Course on General Science.
Government Training College, Trivandrum.	(1) Newsletter for the period October 1959 to March, 1960.
Annamalai University Annamalainagar.	(1) A report of the seminar on the teaching of Tamil.
St. Christopher's Training College, Vepery, Madras.	(1) A report of Citizenship Leaders' Camp. (2) A report of the exhibition of the practical work of the B.T. (1) Students of St. Christopher's College. (3) A report of the Seminar on Library Science. (4) A report of the Evaluation Workshop in Mathematics,
St. Ann's Training College, Mangalore.	(1) A report of the Workshop for Kannada teachers. (2) A report of Group Activity Method of teaching English.
Central Institute of Education, Delhi.	(1) News Letter No. 35, December 1959—February, 1960 issue. (2) Audio-Visual Aids and Their Use—a Report.
Government Training College, Rajahmundry.	(1) News Letter for March-April-May, 1960. (2) A classified catalogue for books in the Extension Library.
Government Training College, Trichur.	(1) Publication No. 10—News Letter No. 4 (From October, 1959 to March, 1960).

SOME THOUGHTS ON EXAMINATIONS

M. Y. Bhide

Implementation of reforms in the present system of examination is a problem that is receiving much attention today, In this article, Shri M.Y. Bhide, Lecturer in Mathematics at St. Xavier's Institute of Education Bombay, discusses aspects of the evaluation approach that transform the whole process of examination, so that it becomes an effective instrument to measure abilities, to diagnose weaknesses and to guide the teacher in planning his day to-day work. The author has conducted several local seminars on Evaluation. —Editor

That the present system of education needs to be improved is an undisputed fact ; that the standard of education needs to be raised is universally accepted ; that the present system of examination is defective is also not denied. Conviction regarding all these facts, however deep, does not by itself constitute a positive approach towards the solution of the problem. It can at best be considered as a first step ; achievement of a more effective result may require a more dynamic approach. This would, in the first instance, require a thorough understanding of the purposes which the system of examination is expected to fulfil.

Purpose of Examinations

An examination measures. In the modern age we cannot do away with measurement, and, therefore, examinations have a definite place in our scheme of things. Having accepted the inevitability of examinations, our next task is, therefore, to perfect the tool. The examination should serve to measure the achievement of pupils in the various subjects and to discriminate between the bright and not-so-bright pupil. It should also help the school authorities and teachers to evaluate their own work and their method of teaching ; it should further prove useful in selecting the pupils for admission to different courses of study and institutions, and finally it should guide us in spotting the bright pupils for special encouragement. Does the present system of examination fulfil these purposes ? We cannot

say positively that it does. The question that next arises is: why is the present system unable to achieve its goals? The reasons are many, and too well known to be repeated here. We shall, therefore, consider how we can improve the examinations, particularly the written tests.

The New Approach to Evaluation

It is here that the modern evaluation approach is likely to prove helpful. It not only seeks to improve the form of written examination, but it helps us to re-think about the whole problem in a more dynamic way. The fundamental issues of the very objectives of education are raised. We realise that the tradition aims of education such as the cultural, the disciplinarian, the aesthetic etc. though no doubt impressive, are not likely to help us much in practice. We have, therefore, to redefine our objectives in more specific terms, so that the teacher not only understands them, but strives to achieve them in his everyday teaching. This specific approach provides him with a classification of objectives in terms of knowledge, application of knowledge, skills, appreciation, attitudes and interests accompanied by the behavioural statement into which each objective is broken. Such precise statement of behaviour changes expected in pupils as a result of their having studied a particular topic guides the teacher in preparing his plan of work. At the same time the process of learning becomes more meaningful to the pupil, and, therefore, his studies become more satisfying; this in turn, urges him to further effort which leads to any self-study and self-reliance two very desirable habits to be developed in intelligent individual. The student now becomes more and more keen to widen the horizons of his knowledge. When this happens it is needless to say that the entire standard of education rises.

Role of the New Examinations

This new and reformed type of examination is no longer a static process of measurement ; it gets transformed into a dynamic process of evaluation. It not only measures but it also helps in interpreting, predicting and diagnosing the causes of pupils' performance, and this is a first step in undertaking a re-assessment of the syllabus, of the methods of teaching, of the methods of testing and even of the objectives which we have set ourselves. It now liberates; the teacher ceases to dominate the whole system of education. It works within its own province and is no longer a machine which has dethroned its own creator.

Such an examination as to be objective so as to be reliable. It must be objective-based in order to enable us to find out whether we have realised the pre-determined goals or not. It should also be valid, thought provoking and discriminating; pupils and teachers should feel stimulated to

further and better effort, in other words it becomes a reliable index of pupil progress and of the suitability of our teaching method, and the worthwhileness of our syllabus.

Qualities of Good Questions

The criteria which have been listed above of the improved type of examination indicate that the form of this examination should also be suitably modified. There are certain fundamental qualities which good questions possess and which we list below.

1. They should be worded in simple language.
2. They should be specific, clear and unambiguous.
3. They should be valid.
4. They should be so objective that whosoever scores the test the result would be the same.
5. They should be thought-provoking and should stimulate the examinee to think and not merely depend on memory.
6. They should be based on pre-determined objectives.
7. They should cover the subject matter.
8. The form of questions should be suitable to the objectives.
9. They should be arranged in order of difficulty.
10. They should draw out the best in the pupils.
11. They should possess discriminating follow-up.

What should then be the form of the questions ? Questions are generally classified under three broad heads : the essay type, the short answer type and the objective type.

From the point of view of objectivity and reliability of scoring, there is no doubt that the objective type is the best. Without going into details it may be stated that the multiple choice question with a really good distractor is usually considered the best since it not only tests knowledge but stimulates the examinee to think. It also lends itself admirably to the different objectives we place before ourselves. However, it must be conceded that this type of question has its limitations. It is not suited to test the expressional skills, particularly verbal expression. Moreover, it is extremely difficult for the common teacher to construct really good objective type of questions and it may not be proper for experts to prepare a pool of such questions for use by all as it may kill any initiative on the part of teachers, as human nature always tries to seek the path of least resistance. It is with experience that teachers will gain more and more insight into the art of framing such questions.

The next type is the short answer type. This is also a good type of question. It is comparatively easier to construct, and with proper care, can be almost as good as an objective type question as regards scoring.

We may bring in certain elements of the essay-type of question in this type. To a small extent, therefore, this type of question will test also the power of expression of the examinee.

The third type of questions is the essay-type and it is this type that has raised the greatest controversy. The defects of the essay type of question are too well-known to be discussed here. Yet it must be conceded that we cannot do away with it altogether. All that we can do here is to provide for safety measures so that the scoring of answers does not become entirely unreliable. Some of the measures suggested by Shri S.K. Dey in the current issues of the Mysore State Education Federation Journal deserve attention. It must be, however, admitted that some subjective element is bound to enter the scoring of answers in this type of questions.

Conclusion

The above discussion has been more or less of a theoretical nature though ways and means have been suggested of putting ideas into practice. But the actual task of implementing reforms devolves on the administrators. Headmasters occupy a very important and key position in any administrative set-up. What is essential, therefore, is to convince headmasters that implementation of the reform is primarily their responsibility, and depends on their leadership.

So long as public examinations remain and they will remain for quite a length of time, efforts need to be made to persuade the public examining bodies to see that these ideas are incorporated in the question papers they set. In other words, the entire educational structure should be geared into proper action if the reform is to be successful. Half-hearted measures ar worse than none.

SOCIETY AND CURRICULUM OBJECTIVES

T. S. Mehta

In this article, Shri T.S. Mehta, Evaluation Officer of the Directorate, has drawn attention to some important aspects of curriculum planning and construction that should be emphasised. Since education has to bring about certain significant changes in pupils, the objectives of learning through which these changes are to be achieved have to be carefully selected. For this purpose, contemporary society provides a wealth of suggestions for suitable educational goals. The curriculum must reflect and be in tune with the needs of society today. Shri Mehta has touched upon some of the demands and opportunities presented by Indian society today.

—Editor

Perhaps the most crucial stage in the process of constructing a curriculum is to decide the objectives which are to be sought through it. Explicit goals are necessary to guide learning because unguided educational experiences may produce a wide variety of effects, some more and others less important, some desirable and others not so desirable. Education is concerned with bringing about certain changes in the ways students behave. It is important, therefore, that the particular changes which schools seek to bring about are really the most significant and that no time is wasted on efforts of superficial value. The identification of the kinds of changes to be brought about in pupils is the process by which objectives of the curriculum are formulated.

Sources of Objectives

Objectives to be appropriate and comprehensive should be derived from a wide range of sources—a study of the learner, opinions of subject specialists, psychology of learning and the philosophy underlying the subject. In the heirarchy of these sources the study of contemporary society occupies an important position, for it provides a wealth of suggestions for educational goals. Conditions in society have important educational

implications with regard to what should be taught and how the content of instruction should be organised. No society desires to produce misfits and liabilities and hence good education will always have to be in tune with the needs of the society.

In India today such an analytical study of society has become all the more important because of the huge task of educational reconstruction in which she is engaged today. India is an ancient country with a distinctive culture of its own which is the resultant of various cultures brought into the country by foreign invaders from time to time. This impact has made us heirs to a variety of civilizations and social systems. Nevertheless, Indian culture has maintained its traditions in an unbroken manner in spite of these inroads. "Indian culture grows in the proper sense of the word, not by accretion but like an organism, undergoing from time to time tranformation as a whole. It has carried within it much of its early possessions. It has cast aside a good deal and often it has found treasure it made its own. It took what it could, whence it could, though it adhered to its original vision. The more it changes, the more it remains the same thing."[1] Reiterating the same characteristic of our culture, Shri Jawaharlal Nehru said at the 1957 Annual Congress Session, "India has a basic cultural outlook of her own but it has been enriched in the distant past by numerous streams coming from various parts of Asia, and in the later years, from the Western world. All these are intimate parts of India and have now been woven into her rich and intricate pattern. It is this composite culture which we have to preserve and develop."

The picture that Indian society presents today is therefore, very complex being a blend of traditions, beliefs, customs and social values on the one hand and of western political, social and educational thought on the other. Our Government is a democracy on the western pattern, our urban life is fast remodelling itself on western modernism and our economy is getting rapidly industrialized. In spite of these rapid changes, it is still possible to make broad-based generalizations which hold implications for our educational process over a period of at least the next few decades. Presented below are a few selected observations embracing long-range educational objectives which demand a re-examination of the existing curricula at the secondary level.

Social and Economic Changes

The first effect of this transition in our social structure is the range of social and economic changes that are taking place in our society. Clearly discernible today is the emergence of a resurgent spirit which emphasizes the revivalism of what was glorious in our past culture. This spirit is reflected

1. Radhakrishnan S. "The Legacy of India"

in the country's policy of national reconstruction and foreign relationships. Equally discernible is the impact of the West on thought and practice. All these seemingly conflicting influences are replete with great consequences, the chief of which perhaps is the gradual breaking-down of the rigidity of our age-old customs, At the same time the pace of change and adjustment is not fast enough and needs to be speeded up through various ways.

This lays a heavy responsibility on the educational system and calls for a re-examination of the objectives of the curricula, particularly in social studies. The programme in this subject is vitally concerned with problems of human living and relationships. All education contributes to social maturity and civic responsibility, but it is in the area of social studies that the effort is made to gain greater social insight, to teach the responsibility of citizenship, and to bring about socially desirable changes in behaviour. The curriculum in this subject should therefore, wean itself away from the tyranny of textbooks, facts, names and dates and should have a greater infusion of anthropological and sociological content. If so recast and enriched, it could play a very significant role in teaching correct social values, which are an essential element for the maintenance of a nation's solidarity and progress.

Adult Franchise

An other important generalization is derived from India's Constitution according to which all citizens over twenty-one years of age are given the right of franchise. This is a major change which has given over 200 million people of India the right to vote. Political power has thus changed hands from the limited few to the entire masses. Power in the hands of ill-informed masses can become a potential source of national danger if sufficient steps are not taken to prepare the people for this privilege. This presents at once numerous educational implications in respect of both adult education and secondary education. New objectives and goals emerge which should be taken care of by our educational institutions. Since secondary education is terminal for the majority of students, it has to carry the main responsibility of preparing future citizens of the country. Some of these objectives are listed below:

(1) To give pupils a knowledge of the Indian Constitution.

(2) To re-examine social values in the light of modern democratic concepts.

(3) To develop desirable attitudes towards the democratic way of life.

(4) To develop independent thinking and judgment about social and political issues.

(5) To develop the art of effective communication.
(6) To develop the power of discriminating facts from propaganda.
(7) To provide training for leadership.
(8) To gain an understanding of the rights and responsibilities of good citizenship.

Population and Standards of Living

Another problem which has come to play a conspicuous role in our national economy is that relating to population. The rate of increase of population in India is so rapid that it defies all efforts to raise the standard of living. Control of population calls for rational attitudes to family planning and an undestanding of the principles of economics, health, hygiene etc. The second consequence that flows from population increase is that of employment. Increasing numbers of young men and women will demand many more vocations and careers. This leads us to certain obvious educational implications to be taken up by our schools such as the need for diversified courses, the importance of guidance and counselling services in schools, the need for understanding labour relationships and above all the development of correct attitudes towards work, prestige and status. All these are new objectives to be tackled by education because society in the next few years will be rapidly industrialised, and if education is not geared to these new social needs, it will only produce unhappy and frustrated misfits.

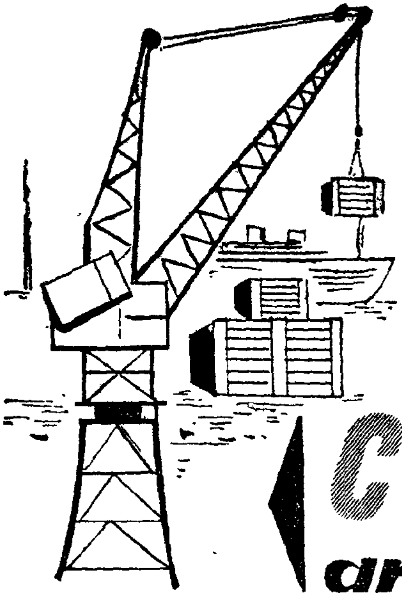
These are some of the demands and opportunities presented by Indian society today. Their analysis provides us with several suggestions with regard to the objectives of the curriculum that should be followed by our educational institutions and the type of educational programme which we need so that our educational institutions can place emphasis on appropriate ends of learning. A few of these suggested objectives are listed below.

(1) To develop values consistant with the democratic way of life.
(2) To develop skill in applying democratic values consistently judging social institutions and courses of action.
(3) To develop understanding of the importance of social action in order to solve social problems.
(4) To develop the ability to think critically and form independent judgment.
(5) To develop an attitude of adjustment to social and individual changes.
(6) To develop a critical appreciation of our cultural heritage.

Several other objectives can be developed from the analysis of the problems in society. If we are to inculcate in our pupils the skills and

values necessary to realise these objectives, then obviously the content of the curriculum has to be remoulded accordingly. For, as Mr. Ralph W. Taylor says,"......because contemporary life is so complex and because life is continually changing, it is very necessary to focus educational efforts upon the critical aspects of this complex life and upon those aspects that are of importance today, so that we do not waste the time of students in learning things that were important fifty years ago but no longer have significance, and that we are neglecting areas of life that are now important and for which the schools provide no preparation."[1]

1. Tyler-Ralph W. *Basic Principles of Curriculum and Instruction.*



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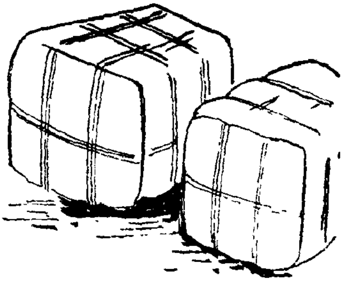

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THE ROLE OF IN-SERVICE TRAINING IN THE EVALUATION PROGRAMME

K. Seshu Iyengar

Shri K. Seshu Iyengar is the Co-ordinator of the Extension Services Department at Kurnool, Andhra Pradesh. In this article, he outlines how in-service training, under the guidance of the Extension Services Departments, can help teachers to equip themselves in a practical way, with up-to-date methods of evaluation, and to keep in touch with modern educational philosophy. —Editor

The modern philosophy of education, which emphasises the development of the personality of the pupil, makes it the responsibility of the educator to stimulate pupil growth in attitudes, interests, appreciation and other desirable personal traits in addition to providing understanding of laws, concepts and skills. Much has been said about the defects of the present-day classroom teaching and testing, which lay emphasis on information and rote memory alone. If critical thinking and the ability to apply knowledge in a meaningful way, are to be developed in the student, there is no short cut for the teacher; he has to evolve an approach by which all the desirable qualities can be developed. The modern evaluation approach to education offers a solution worth adopting in any teaching-learning situation.

Teachers have to define clearly their objectives of teaching the subject and to evolve tests to check up achievement, application, work-study skills, attitudes and appreciation, so that they may gauge whether the desired objectives are achieved or not.

The teacher has to keep himself in touch with the changes in the concept and philosophy of education and to equip himself with up-to-date knowledge and techniques. In-service training can be effectively organised to help the teacher in these two tasks. It can tackle the problem of implementing improved procedures in the classroom.

In evaluation, the programme may include examination reform and

the evaluation approach; training in techniques of preparing test items based upon certain specific objectives; providing the teachers with a sample test pool and with learning experiences for certain units of the syllabus (which they can use directly in their work) and undertaking research studies in the field of evaluation.

In workshops, seminars and study circles, Extension Services Centres can work with teachers on the following aspects of evaluation:—

(1) What is the evaluation approach to education?

(2) What are the steps in the process of evaluation?

(3) What are the objectives and their attainment behaviours for teaching a particular subject?

(4) How to formulate a learning experience for a specific situation.

(5) How to formulate a good test item.

(6) How to formulate a test giving proper weightage to different units of the syllabus.

(7) How test results can be used for providing diagnostic and remedial programmes.

They can evolve sets of evaluation tools and learning experiences for the different units of the syllabus.

The programme of in-service education does not stop at the level of the workshop, but is continued in the school. The material prepared at the workshops can be utilized in actual classroom practices based on the evaluation approach to teaching and testing. The Extension Services Centres can help the teacher in carrying out small action-research projects in the schools.

A large test pool can be collected in successive workshops or by contribution from individual teachers. This material can be made available to teachers for use in their class tests.

Basically, the administrator is the person who will determine the success of a follow-up programme. To make the programme of 'in-service' successful, the involvement of the headmasters or the principals and the inspectors of schools is essential. Inspecting officers can inspire, guide and help in co-ordinating the various activities and make co-operative problem-solving and action-research possible. To achieve this end, Extension Centres should attempt to secure the participation of the administrator in orientation as well as in follow-up programmes.

Teachers derive greater benefit from in-service programmes if orientation is provided for them in their pre-service training also. The pre-service trainees are receptive and are enthusiastic to experiment on almost any technique that will be successful in the classroom. The role of the Extension Services Centres in the programme is to help the pre-service teachers in finding out the advantages of group techniques;

isolating the objectives of teaching individual units, with their attendant behavioural changes, formulating informal tests for different units; practising selected units in the class-room using the evaluation approach and providing diagnostic projects.

The impact of in-service programmes on the evaluation approach cannot easily be measured since the process of orientation and practice are considerably hampered by many extraneous factors. It will be worthwhile if the Extension Centres encourage the teachers to take up such action-research projects, because they can provide the necessary guidance to undertake such simple projects and can disseminate the information in collaboration with the Inspectorate, to all the schools in the area.

Summary :

Inservice programme for

(a) teachers
- (i) Orientation.
- (ii) Collection of evaluation tools and learning experiences.
- (iii) Follow-up.

(b) administrators
- (i) Orientation.
- (ii) Working along with them in follow-up.

(c) teacher-trainees
- (i) Orientation.
- (ii) Working out test materials and sample learning experiences.
- (iii) Follow-up (when they are in service).

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SPEECH EDUCATION AND THE TRAINING OF TEACHERS

C. L. Kapur

It has been well said that the pen is mightier than the sword. The appeal of the written word is no doubt strong ; the effect of the spoken word is more pqwerful, particularly on the young. For a teacher, his voice is his most precious asset. He must be taught how to use it well himself and also how to develop good speaking habits in his pupils.

Mr. C. L. Kapur, Chief Producer of Educational Programmes in the All India Radio, New Delhi, discusses in the article how skill in good speech can be developed by scientific training. It may be remembered that Mr. Kapur contributed an earlier article on Radio in the Service of Education, which was published in the 'Teacher Education' of March 1959. —Editor

Speech is the chief stock-in-trade of a teacher. Most of his business is done through the spoken word. And, yet, strangely enough this aspect of his training has not received much thought. Perhaps it is considered that a good voice is nature's gift and good speakers are born, not made. We speak too, of 'born teachers', but that does not prevent us from organising elaborate courses of teacher training. If teachers, at any rate ordinary teachers for ordinary schools, must needs be trained to give them skill and knowledge in the art of transferring knowledge, thought might as well be given to the need for training teachers in the skilful and effective use of the gift of speech.

Speech an Acquired Skill

Speech is an acquired skill. The basis, no doubt, is the voice, and like handwriting voice is distinctive and unique to many persons. Some voices are rich and sweet, while some are raucous and harsh ; they grate on the ear. But even the most gifted of speakers owes his proficiency in speaking, to practice, to voice cultivation, to the subtle modulation of voice

which breathes life and distinction into his utterance. If speech is an acquired skill, it is well worth acquiring it methodically and well.

A story is told that Akbar, the great Moghal, was fascinated with the origins of speech, and he tried to discover the original, native speech of man by taking half a dozen new-born babies and putting them together in an enclosure, away from human speech. Only mutes were permitted to attend on them and human speech was not allowed for miles around. The children grew up, but they were just mutes. They did not develop any language. But the helpless children imitated the sounds and songs of birds and beasts. They delighted in reproducing and repeating them. But of coherent speech they were completely innocent. They did not invent any new language for the communication of their needs or for the expression of their feelings or sentiments. The story may be true or false, but it serves admirably to drive home one point that speech is an acquired skill. Ordinarily, it is learnt empirically by the slow process of imitation. Few of us take the trouble to apprehend or distinguish the minute subtleties and nuances of speaking. The result is careless and slipshod speech. Most men are not able to make lively conversation around a cup of tea. Again, not many of us can make a public speech with poise and effect. Nature has given to man a simple but very efficient apparatus of speech, capable of producing an infinite variety of sounds. But speech is a human invention and men learn it well or ill, according to circumstances. Speech is articulate and purposeful utterance. It is coherent meaningful noise. It postulates standardisation and conformity to accepted modes of intonation and utterance. It is sound symbolisation of thought and feelings.

Speaking and Hearing

Speaking and hearing are two aspects of speech. It is only those who can hear that can speak. The mute are dumb, because they are deaf. They have a tongue as good as that of any of us. They have lips and teeth ; they have vocal chords and a pair of lungs and, still they cannot speak ! Of course, they utter noises, incoherent and meaningless, but they have no idea of speech. The reason is that they have no mental picture of sounds. They cannot imitate what others around them say and speak. Human ingenuity has, no doubt, developed the science of 'speech reading'. The mute can be trained to speak and even ply a conversation, just by observing and reading the position of the lips and the tongue of the speaker and making up meanings with their trained eyes and intelligence.

The basis of all good speech is hearing. Those who possess keen ears acquire good speech, while those whose hearing is either less keen or positively deficient or defective, cannot be expected to acquire in that measure the skill and competence in pleasant and effective speaking. It is

common to test the eye-sight, since good vision is regarded as an essential condition for reading, writing and observing. But very little thought has, so far, been given to testing the hearing of learners. Very little use is being made of hearing aid. If a sample survey were attempted, it would reveal a large number of cases of deficient hearing. People with defective hearing can never acquire mastery in speaking. Thus, speaking and hearing are very closely inter-related.

And so are speaking and breathing ! Sounds are conveyed to the human ear by sound-waves produced by disturbances in the atmosphere. Man produces noises with his breath—both while he pumps out the wind from his lungs, as also while he takes in breath. Most of the sounds of speech are produced by the outgoing breath, but some languages have sounds which are produced when the person is inhaling the breath. And good lungs and correct breathing habits very largely condition our speech.

The Two Categories of Sounds

Broadly speaking, man is capable of producing two types of sounds—the stop sounds and the non-stop sounds. We speak of them as vowels and consonants as well. Vowels are non-stop sounds. They are produced simply by forcing wind through the vocal chords. The shape of the sound is determined by varying the chamber through which it passes by the skilful movement of the lips and the tongue. A, O, E represent sounds of this type. Music has more of them. They have greater carrying capacity and can be heard at comparatively longer distance than the other category of sounds, which are produced by causing impediments at various points in the way of the out-going breath. K, g, b, d, c, p represent sounds of this type. Words are combinations of stop and non-stop sounds. Generally, stop sounds are connected and strung together with non-stop sounds, both long and short. Some languages, specially dead languages, occasionaly put two or more stop-sounds together, but such words are not easily speakable. Spoken language is invariably made up of words which have stop and non-stop sounds in more or less even proportion. Writing, especially writing in orthographic scripts has been occasionally responsible for partial vitiation of speech.

Exercise and Control of Organs of Speech

Exercise is necessary for physical health. Unfortunately, in planning physical education, we often stop at the neck. We give exercise to all the muscles below the neck, but do not give any exercise to muscles above the neck. Our body has thousands and thousands of muscles ; and for keeping them healthy and strong, it is necessary to give them exercise. Of course, in the tasks of living and working most of the muscles incidentally

get exercised, but that is not enough. To gain mastery and effective control over our muscles, planned and graded exercises are necessary. Muscles that move the jaws, the lips and the tongue must also be exercised, if we wish them to do their several tasks efficiently. Exercises can be both recreational or remedial.

Speaking, we said before, is a function of breathing ; and for attaining proficiency in speaking, it is necessary to ensure correct breathing habits and reasonably strong lungs. Deep breathing in the open air for a few minutes every morning will give one control over breathing. Similarly, thought will have to be to given to oral health. The tongue has to flit about in a narrow space and it should be exercised to do its difficult job, and it should be clean and healthy. Speech education will thus start with exercise of the various organs of speech. That way alone can we gain greater mastery in playing them purposefully.

Good speech has two aspects—utterance and thought-content. The total performance depends on the appropriate choice of words and the quality of voice—and a balanced blend of the two. The two must combine and mingle to bestow on the speaker the distinction of effective and pleasant speaking. The science of speech will, therefore, comprehend not only training in performance but a study of semantics and training in clear thinking to build up an argument.

The commonest form of speech is conversation. Conversation has both privacy and intimacy about it. A soft voice in a friendly tone is necessary for giving to persons participating in the conversation a sense of closeness and intimacy. Shouting makes of conversation a harsh and unpleasant experience for all but the 'shouter'. Man is very fond of listening to his own voice.

Reading aloud is another form of speaking. Here, thoughts and words are there ready to hand. In reading aloud, the person endeavours to interpret and convey the thoughts of and feelings of another. In reading aloud people often mistake speed for fluency and the forget to put between chains of words, small spans of silence so necessary for effect and easy comprehension. It is sometimes said that 'silence talks'. What is intended is that unless we put pauses of silence in our speech, the listener is not in a position to assimilate the thought-content of the utterance.

There is, then, recitation and speaking of verse. Good recitation is a delight to listen to. But it comes by practice and is based on clear understanding of the passage and the mood of the writer. Voice alone will not make a person a good reciter. He must cultivate the knack of entering into the spirit of the passage, although the cultivation of voice is equally necessary.

Similarly, declamation requires thoughtful preparation and long

practice. Then there is the art of public speaking, an instrument of great power in the affairs of man. Oratory and effective public speaking have shaped the course of history. The downcast have been infused with new courage and enthusiasm. The afflicted have been solaced by the soothing effects of a balmy speech.

Lastly, we may mention acting. Good acting is hard to come by. A good actor speaks naturally, although he has conned up his part and repeats what he has memorised and is being cleverly prompted to speak. A good actor does not rattle off his words. He speaks them just as he would if the part he is playing actually belongs to him in a real-life situation.

Conversation, reading aloud, declamation, recitation and speaking of verse, public speaking and acting are some of the forms which human speech takes. Being an acquired skill, it will need training even for the best; and as for the lazy and the careless it it absolutely essential. Half the ills and defects of teaching would vanish as by magic, if we could give place to speech education in the training of teachers and in the general education of coming generations of children.

Speech education has been neglected at all stages and at all levels of education. In fact, with progress, the position has deteriorated. At one time, an oral test in 'reading aloud' used to be part of the system of examination in languages. But, as numbers grew, Universities and examining bodies could not cope with this form of examination and dropped it under the pressure of numbers. Public Services Commissions have often complained of the low standards of performance in *viva voce* tests.

In our country we have no national theatre in the accepted sense and the amateur dramatic clubs, even in big towns, are often in a bad way. Good acting is uncommon, as the country does not provide any facility for those with histrionic talent to improve their skill and art. We have no National Park of oratory either—like the Hyde Park of London, where you find so many soap-box orators gathering audiences around them and haranguing them in their own crude way. Some of the greatest orators of that country started as soap-box orators. Another thing that we miss in our country is the vogue of taking courses in elocution. Language teaching is done in a perfunctory way. Very little use has been made so far of linguaphone records either in schools or colleges. The use of the tape-recorder is very limited. The radio has, no doubt, made people slightly speech conscious. But, although the All India Radio in its Staff Training School holds periodically courses in the art of announcing, news-reading and play-acting, these courses are meant for those working in the organisation, and people outside the broadcasting profession have no facility for receiving training and gaining skill in the art and science of speech in its

numerous forms. Amateur acting and occasional debating in university and college unions, no doubt, offer chances to the naturally-gifted to exploit their talent but for the ordinary person seeking training and proficiency in the art of speaking, there are few facilities. There are no short or long courses leading to diplomas or degrees in the art of speaking. It is, therefore, time that our universities and State Education Departments turned their thoughts to giving speech education a place, both in the training of teachers and in the general education imparted in schools and universities.

Introducing Books on Evaluation

In this issue we introduce our readers to the fourth in the series of books on evaluation. The digest was prepared by Shri Y.B. Patwardhan, Evaluation Officer of the Directorate.-Editor

This book, as suggested by the title, is a treatise on measurement in education, a subject which is rapidly growing in its scope and utility. It deals with a multitude of problems relating to the construction and use of measurement tools by classroom teachers and school administrators.

The book is divided into four parts. Part I deals with the problem of measurement and contains four chapters. Part II discusses in three chapters the construction of teacher-made tests. Part III brings out the salient features of the testing programme in a span of three chapters. Parts IV has seven chapters in which are emphasised the problems that arise in the use of measurement in instruction.

The first chapter brings out the relationship between the growth of a science and the extent to which measurement is applied to it. It points out the difference between measurement in physical and biological sciences and that in social sciences. Measurements are always accompanied by errors which can be minimised but can never be altogether eliminated. The chapter lists the varieties of instruments of measurement employed in schools for various educational purposes.

The second chapter relates the historical development of measurement in education, and the growth of intelligence testing, experimental psychology, statistical methods, abnormal psychology, applied psychology, aptitude testing, achievement testing and measurement of character, personality and interest. The unreliability of traditional examinations and the need for more valid methods of assessment such as rating scales, questionnaires and interviews.

The third chapter is devoted to the procedures of statistical analysis of test results. The different ways of handling the data are discussed. The use of relevant formulae is illustrated with the help of concrete data. The mean, the median, the mode, the standard deviation,

correlation, co-variation, and reliability and validity co-efficients are the main topics dealt with.

The fourth chapter brings out the essential characteristics of satisfactory measuring instruments. It is pointed out that in any satisfactory instrument the three qualities of validity, reliability and usability are indispensable. The methods of validation of intelligence and achievement tests are fully discussed. At the end of the chapter the important generalisations regarding the problem of measurement are listed and discussed.

Discussion and suggestions regarding the general principles of test construction follow in the fifth chapter. These principles are grouped under four heads namely, planning, construction, try-out and evaluation, which indicate roughly the steps or stages in the process of teacher-made tests. Detailed suggestions are made on each of these four steps, supplemented by necessary formulae and specimen forms.

Chapter six details the principles of constructing specific types of objective tests such as simple recall, multiple—choice and matching. Comparative validity and reliability of each type of test, its advantages and limitations, are fully discussed and illustrated by concrete examples.

This is followed in the next chapter by a description of the construction and use of the essay examination. Its limitations in respect of low validity and reliability are pointed out and suggestions are made for reducing these defects and improving their scoring or grading.

Selection, administration and scoring of tests, analysis and interpretation of scores, and ways of maintaining records and of reporting to pupils, teachers, administrators, parents and the public are dealt with next, accompanied by suggestions as to the precautions to be taken while using profiles.

This importance and use of graphical representation of educational data are brought out in chapter nine and the difficult types of graphical representation and their uses are fully discussed and illustrated.

The tenth chapter is devoted to the discussion of the uses and limitations of different norms. The questions of norms versus standard, raw scores and derived scores and the use of norms in interpreting different scores, are fully discussed. Useful numerical illustrations are also supplied.

The next chapter deals with motivation and practice as related to learning and details the importance and meaning of motivation and its implications in educational theory and practice.

Diagnostic and remedial procedures, and the use of preventive diagnosis, classification and promotion of pupils, individual and group differences and the question of homogeneous or ability grouping are discussed, and their implications to teaching practices are brought out in

the next two chapters. The author then proceeds to discuss evaluation in guidance where he brings out the importance of guidance and the place of measurement in it. A detailed list of principles of evaluation in schools follows together with the different standard forms for keeping record for overall evaluation. Practical suggestions for evaluation of schools are also listed.

A whole chapter is devoted to the question of how to develop good public relations. Local newspapers, students' publications, annual reports, special reports and publications, report cards and letters to parents, school exhibitions, school-visits and parent—teacher associations have each their part to play in building happy public relations. The concluding chapter deals with present trends in educational practices, different types of reliability, and validity, factor analysis, achievement vs intelligence vs aptitude tests, and evaluation techniques.

In addition to the above, the book contains six appendices which give questions to help learn statististics, simple procedures of item analysis, a discrimination table, simplified procedure for obtaining reliability co-efficient, a table for square roots, and a list of publishers of standard tests. A long list of relevant references is supplied at the end of each chapter. These facts have greatly contributed towards making the book very valuable to teachers and research scholars.

—Y.B.P.

ITEM ANALYSIS AND TEACHER MADE TESTS

V. B. Taneja and R. H. Dave

Construction of objective-type tests is a challenging and exciting experience. At the same time it is a task that demands very vigilant care on the part of the teacher. It requires ingenuity and understanding. Most teachers believe that a test has served its purpose when it has been administered, scored and recorded in some form or other. To end the process at this point, however, is to lose much of the value of a test. For an analysis of pupils' responses to the several items holds great diagnostic value. These responses indicate how far the pupils have learnt the unit concerned and thus helps in improving teaching as well as learning processes. Herein lies the guiding function of the test, the function which is as important as screening. This kind of analysis of pupils' responses goes by the term *item analysis*. There are, of course, other values flowing out of the item analysis, chief among which may be mentioned that it provides a basis for improving the test items themselves which in turn help a teacher to prepare better tests subsequently.

Purposes of Item Analysis

Item analysis tries to answer the following questions:

How hard or difficult was the item? How discriminating was it? Was it able to distinguish between the more able and less able students? Were all the options equally attractive? Or were there some alternatives which were not selected by any of the testees? If there are such unattractive items they do not obviously serve any purpose and would, therefore, have to be excluded.

The Difficulty Index

The first question that was posed in the previous paragraph deals with the difficulty of the item, which is defined as the proportion of pupils who mark answers correctly or who know the answer. This is usually expressed in terms of percentage. As for example, if sixty per cent pupils mark the answers to the item correctly, its difficulty value is sixty per cent.

Generally, however, a correction has to be employed in order to eliminate chance factors, for a certain number of pupils may mark the correct answer by mere chance. The formula used for such correction is $S=R-\frac{W}{0-1}$, where S stands for the score, R for the number of testees who select correct responses for the item, W for the number of testees who select wrong responses for the item and 0 is the number of responses in each item. It is assumed that all items will have an equal number of responses. Thus, when a five-chance item has been correctly answered by 38 pupils and incorrectly answered by 12, the score of that item is $38-\frac{12}{5-1}=35$ Hence, its difficulty value is $\frac{35}{50}\times 100=70\%$

This procedure of correcting chance factors operates under two assumptions:

(1) that all the testees mark the incorrect responses on the basis of chance factor alone, and (2) that all the incorrect responses are equally attractive to the testees. In actual practice, however, the extent to which the two assumptions are valid varies with the nature of the item. It frequently happens that the wrong option is selected on the basis of misinformation on the part of the testees rather than on the basis of guessing. In such a case the formula tends to over-correct the chance factor, although this over-correctness is in a large measure offset by the fact that incorrect chances in an item are rarely attractive in an equal degree.

Some testees neither mark the answer correctly nor incorrectly. They merely leave it blank. This may mean one or two things—either the pupil deliberately refrains from marking the answer because the directions discourage him from making a guess or the pupil has not had the time to deal with the test. This category of testees are called as "non-reads" i.e., they could not reach the item while taking the test. In applying the formula such testees should be excluded from the total number of testees taking the test. Thus, the formula to calculate the percentage of correct responses would be:

$$P=100\times\frac{R-\frac{W}{0-1}}{N-NR}$$

where P=percent of correct responses, R=Number of testees answering the item correctly, W= Number of testees answering the item incorrectly, N=Total number of testees, NR= Number of testees who did not reach the item, that is, the "non-reads" O,=Number of options in each item.

To find the "non-reads" the usual rule to follow is to take all the items which come after the last-answered one as not having been reached. Thus, the few items will not be classified as "non-reads." For example,

in a test of 50 items, if a testee has answered items 1 to 30 and 36 to 43, then items 45 to 50, will be treated as the items not reached. Items 31 to 35 should not be considered as "not-reached items but as *omitted items.* The testee had the time but did not answer then because he did not know the answers or he did not want to make a guess. The method of applying the formula in True-False, Multiple-Choice and Matching Exercises is illustrated below:

1. **True-False Item : Here the number of options is**

2 $P = 100 \times \frac{R - \frac{W}{0-1}}{N-NR}$ which reduces to $P = 100 \times \frac{R-W}{N-NR}$. If an item has been answered correctly by 30 and incorrectly by 15 cases and there are 15 not—reached testees, then N=60, NR=15, R=30 and W=15, $P = 100 \times \frac{30-15}{60-15} = 100 \times \frac{15}{45} = 33.3$ per cent.

2. **Multiple Choice Item**

If there are four options and 30 testees have answered the item correctly, 15 incorrectly and 15 have not reached the item, then as before N=60, NR=15, R=30 and W=15 but 0=4 therefore $P = 100 \times \frac{R - \frac{W}{0-1}}{N-NR}$ becomes $P = 100 \times \frac{30 - \frac{15}{4-1}}{60-15}$ or $P = 100 \times \frac{30-5}{45} = 100 \times \frac{25}{45} = \frac{500}{9} =$ 55.5 per cent.

3-A. **Matching Exercise.**

Let there be three items in each of the two columns I and II. Let the number of testees selecting each response be as shown below, the correct response being underlined. Let there be no NR in this case.

Col. I	Col II	Item 1	Item 2	Item 3
a	I	10	8	<u>52</u>
b	II	<u>35</u>	4	5
c	III	15	<u>48</u>	3
	N=	60	60	60

The corrected percent for these three items would be:

$$P \text{ (for item 1)} = 100 \times \frac{35 - \frac{25}{2}}{60 - 0} = 100 \times \frac{45}{120} = 37.5 \text{ per cent.}$$

$$P \text{ (for item 2)} = 100 \times \frac{48 - \frac{12}{2}}{60 - 0} = 100 \times \frac{42}{60} = 70 \text{ per cent.}$$

$$P \text{ (for item 3)} = 100 \times \frac{52 - \frac{8}{2}}{60} = 100 \times \frac{48}{60} = 80 \text{ per cent.}$$

3-B. Matching Exercise

Let there now be NR cases as shown below. In each case the number is different.

Col. I	Col. II		Item 1	Item 2	Item 3
a	I		6	8	25
b	II		40	2	10
c	III		4	35	5
		NR	10	15	20
		N=	60	60	60

The corrected per cent for these three items have been computed below:

$$P \text{ (for item 1)} = 100 \times \frac{40 - \frac{10}{2}}{60 - 10} = 100 \times \frac{35}{50} = 70 \text{ per cent.}$$

$$P \text{ (for item 2)} = 100 \times \frac{35 - \frac{10}{2}}{60 - 15} = 100 \times \frac{30}{45} = 66.6 \text{ per cent.}$$

$$P \text{ (for item 3)} = 100 \times \frac{25 - \frac{15}{2}}{60 - 20} = 100 \times \frac{35}{80} = 43.8 \text{ per cent.}$$

In actual practice, however, the difficulty is never calculated on the basis of the total group as has been done in the above illustrations. It is estimated from two groups, namely, from the highest 27 per cent and the lowest 27 per cent of the testees.

Discrimination Index

This is defined as the degree to which an item discriminates pupils of high ability from those of low ability. The simplest way of finding discriminations is to compute $p \times q$, where p is the percentage of the testees answering an item correctly and q is the percentage answering it incorrectly. Thus, if 30 per cent of pupils give correct answers to an item and 70 per cent give incorrect answers, the number of discriminations will be $30 \times 70 = 2100$. Accordingly the maximum number of discriminations will be obtained when the difficulty index of an item is 50 per cent; for it will then amount to $50 \times 50 = 2500$. As the items are harder or easier, the number of discrimination becomes less. When all testees pass or fail in an item the number of discriminations is zero. Such an item, therefore, ceases to "discriminate". Statistically the discriminating power of an item is expressed in terms of the critical ratio, the biserial coefficient of correlation, the product-moment coefficient of correlation and the phi-coefficient. Each of these statistics has merits as well as drawbacks as a numerical expression of an item is a discriminating power. The discussion of these statistics, however, are beyond the scope of this article.

Computing Difficulty

Two methods of computing difficulty and discrimination index on the basis of the upper group (27 per cent of the highest testees) and the lower group (27 per cent of the lowest testees) are described below:

Method I

(Devised by Julian C. Stanley)

Arrange the answer papers duly scored in the order of their rank, beginning with a paper having the highest score. Count off 27 per cent of the total number of papers from the top of the pile (the best papers) and call it the 'High group'. Correspondingly, take off 27 per cent (the same number) of papers from the bottom and call it the 'Low group'. Keep aside the middle group of pupils for the time being.

Now find out the number of pupils from the high group who have answered a particular item incorrectly. Call it W_H. Similarly find out the number of pupils from the low group who have answered the same item incorrectly and call it W_L. *Consider these cases who have omitted the item as incorrect in each case.*

Then $W_L - W_H$ gives an estimation of Discrimination and $W_L + W_H$ indicates its relative Difficulty. That is the larger the value of $W_L + W_H$

the harder is the item for the group of pupils tested. To estimate the difficulty in percentage, $W_L + W_H$ may be multiplied by a constant $\frac{100}{2n}$, where n is the number of answer papers in the high group (or low group).

If the correction for chance is also to be made to the estimation of difficulty along with converting it into percentage, the constant with which $W_L + W_H$ is to be multiplied will be $\frac{100 \times O}{2n\,(O-1)}$, where O represents the number of options in a given item.

For example, if there are 150 answer-scripts, arrange them in the descending order of their scores.

Now, 27 per cent of 150 when rounded off to a whole number will be 41. Therefore, select first 41 papers and call it the high group. Also count off the lest 41 papers and call it to the low group. Make an itemwise tabulation and find out W_H and W_L for each item.

Suppose that for a given item five options, $W_L = 32$ and $W_H = 11$. Hence the estimate of Discrimination will be $W_L - W_H = 32 - 11 = 21$.

Also, $W_L + W_H = 32 + 11 = 43$, gives a relative value of Difficulty of the item in the test. The percentage Difficulty duly corrected will be,

$$\text{Difficulty value} = \frac{100 \times 0}{2n\,(0-1)}\,(W_L = W_H)$$

$$= \frac{100 \times 5}{2 \times 41\,(5-1)}\,(32+11)$$

$$= 66 \text{ (approximately).}$$

However, for certain purposes, $W_L + W_H$ is quite enough indication of difficulty on the basis of which the test may be rearranged at the time of revision so that the items appear in the ascending order of their value of $W_L + W_H$. Thus, the test will have the arrangement of the items from the easiest to the hardest.

Calculations become easy when the total number of cases are 185 or a multiple of 185 so that their 27 per cent is either 50 or a multiple of 50.

For computing the discrimination ($W_L - W_H$), a table (table 46) from where this value can be read is given in Appendix B (page 44) in *Measurement in To-day's Schools* by Ross and Stanley.

Method II

After all the papers have been scored, arrange them in order from the highest to the lowest marks. Select the top 27 per cent and call it the high group. Select the bottom 27 per cent and call it the low group. For each item calculate the per cent of successes in both the groups by

the formula already stated. Flanagam and Davis have prepared a table from where both the difficulty and discrimination indices can be read. The discrimination index is given as product-moment coefficient correlation. This table is very easy to ready. On the top is given the per cent of successes for the high group and on the left hand column is given the per cent of successes for *the low group. Below the per cent of successes in* the high group and opposite the per cent of successes in the low group, we find *two* figures in the cell. One gives the difficulty index and the other product-moment co-efficient correlation.

Example:—The data of a multiple-choice item with four options A, B, C, and D is given below. The correct response is A.

	High Group	*Low Group*
N	50	50
A	33	10
B	1	2
C	9	14
D	3	11
Omit	—	2
NR	4	11
Percentage of Successes	60	3

The Flanagan and Davis table with these percentages shows that the difficulty index of the item is 32 and the Product-moment co-efficient correlation is 70. These results show that it is a good item; that it is a reasonably difficulty item, because 32 per cent testees give the correct answer and that it has discriminated well because the coefficient is as high as 70.

An item for which the low group has more successes than the high *group is said to be negatively discriminating. That item should either be* modified or discarded.

Example :

	A	B	C	D	Omit	NR
High Group (50)	14	20	14	2	0	0
Low Group (50)	13	7	19	10	1	0

Here 19 testees form the low group and only 14 persons form the high group. Select the correct response.

When no testee from the low group selects a response, that response is ineffective and the response should be so modified that at least a few testees select it.

Example :

	A	B	C	D	Omit	NR
High Group (50)	47	3	0	0	0	0
Low Group (50)	43	7	0	0	0	0

Here only the options A and B are effective. Actually this multiple choice item has two options rather than four. In such a case the options must be changed, or else it should be made a true-false item.

The following are a few illustrations of the test-items along with some data of their analysis—obtained as a result of their tryout as part of a full science test on a sample population of one part of Gujerat, The estimates of discrimination and difficulty are made according to the method I described before. The inferences to be drawn regarding the merit of these items and the options under each, and also the suggestions to be made for modifying the items in the light of the analysis, are left to the readers.

(1) **Item:**

The following are some of the properties of air. Which one of them supports the fact that air is a mixture?

A. Air has weight and therefore it exerts pressure on the earth.

B. The composition of air is slightly different at different places.

C. Air can be converted from a gaseous state to a liquid state.

D. Air can be compressed like other gases.

E. Air is transparent to the sun rays.

Key: B

Item-Analysis:

	A	B	C	D	E	Omit	Total (0.27n)	$W_L - W_H$	$W_L + W_H$
High Group (0.27n)	1	39	4	3	3	—	50	23	45
Low Group (0.27n)	7	16	14	5	7	1	50		

(2) **Item:**

Which one of the following mirrors can give an image which is virtual and smaller than the object?

A. Plane
B. Concave
C. Convex
D. Concave or Convex
E. Plane or Concave

Key: C

Item-Analysis:

	A	B	C	D	E	Omit	Total (0.27n)	$W_L - W_H$	$W_L + W_H$
High Group (0.27n)	1	0	46	3	1	—	50	37	45
Low Group (0.27n)	2	10	9	6	5	18	50		

(3) **Item:**

Which one of the following allotropes of carbon is crystalline in form?

A. Coke
B. Soot
C. Wood charcoal
D. Mineral coal
E. Graphite

Key:. E

Item-Analysis:

	A	B	C	D	E	Omit	Total (0.27n)	$W_L - W_H$	$W_L + W_H$
High Group (0.27n)	2	1	0	4	43	—	50	11	25
Low Group (0.27n)	1	2	2	13	32	—	50		

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A Revised Note on the Incorporation of the Evaluation Approach in the B. Ed./B.T. Syllabuses.

In the October 1959 issue of Teacher Education, we published a note on how the concept and approach of evaluation could be incorporated in the B.Ed./B.T. syllabuses. This note was circulated to all the universities and training colleges for consideration. The Evaluation Officers were also able to discuss it with the principals and lecturers of the training colleges when they met at recent workshops. Based on their suggestions and comments, the note has been revised and is published below. Comments and suggestions would be greatly appreciated. —Editor

It is now being increasingly realised that a true evaluation of educational attainments should take into consideration the integral relationship between objectives, teaching and learning. This relationship has also been accepted as the basis of the ten-year phased programme of examination reform that is being implemented in the country.

The approach to evaluation holds great possibilities. On the one hand, it clarifies the teacher's understanding of the objectives to which his teaching is directed and on the other, it helps him to adopt such methods as are most suited to achieve those objectives. It follows, therefore, that teachers—those in service as well as future entrants—should be acquainted with the concept and procedures of evaluation. Teachers in service are gradually being oriented to the new ideas through various in—service programmes organised by the Directorate as part of its long-term plan for examination reform. It would, however, strengthen the progress of the reform if teachers under training are also given an insight into it while they are still in the training colleges.

The subject of educational evaluation can be introduced in the training programme as part of the theory as well as of the practice of education. The concept of evaluation could be incorporated in the papers of the B. Ed. Pr. B. T. examination, and the necessary practical work

could be made a part of practice teaching and included in the methodology papers.

Below are listed a few topics and practices to be adopted under three sub-heads (i) Theory (ii) Methods of teaching (iii) Practice teaching. These should, however, be taken to suggest only the scope of the ground to be covered rather than the form in which the adoption may be done. The topics suggested under theory may be incorporated in any of the theory papers wherever they can be best fitted. The items under heads (ii) and (iii) are suggestions on desirable practices which would help teacher trainees actually to practise the new approach and thereby grasp all its implications.

It may be emphasized at this stage that the various steps involved under (III) should not be treated as unvarying as the Herbartian steps. The teachers should feel free to try their own approaches keeping in mind the underlying philosophy of evaluation. The new concept should not be allowed to grow into an obstacle to experimentation in methodology.

Again, the topics detailed below have been spelt out only for the sake of clarity and are not intended to add to the already heavy B.Ed. syllabus. In fact, some of the points in theory and practice can be conveniently integrated with the topics already existing in the present syllabi.

(I) Theory

1. Concept of Evaluation
2. Evaluation in Education
   (a) Educational objectives, their importance and the need for defining them in terms of learning outcomes.
   (b) Evaluation and its integral relationship with the objectives of teaching and learning experiences.
   (c) Evaluation as a means of improvement in curriculum, teaching methods and pupil guidance.
3. Techniques of Evaluation with special emphasis on achievement and maintenance of pupil records.

(II) Methods of Teaching

1. Formulation of specific objectives in the subjects offered by the student-teacher for practice teaching.
2. Defining some important objectives in terms of expected learning outcomes.

Note: The above items could be taken up as group work.

3. Other topics such as the study of the syllabus, teaching methods and evaluation procedures, should be related to the objectives of teaching the subject. This will make the whole course integrated.

(III) Practice Teaching

1. Planning learning experiences on some of the units in the subjects offered by the student-teacher and trying them out.

Note: Such planning should indicate:—

a. The specific objectives desired to be achieved.

b. Expected learning outcomes.

c. Selection and organisation of content matter with reference to the contemplated outcomes.

d. Details of teacher and pupil activities.

2. Preparing, administering and scoring a test of at least twenty-five to fifty items on some units taught during the teaching practice.

Note:—This test may be based on one or two units covered by the student-teacher during his practice teaching and it should aim at assessing the achievement of the specific objectives and outcomes kept in view by the teacher while teaching the topic.

3. Preparing a short report on the performance of the pupils including summarization of test results, interpretation of test data in terms of the objectives and suggestions for modifications in the content, methodology and other aspects.

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Teaching Science to the Gifted Child

S. Gogia

Smt, S. Gogia, who is the Principal of the Government Girls' Higher Secondary School, Turkman Gate, Delhi, outlines in this article, some of the ways in which gifted children can be provided with additional experiences, appropriate to their special needs, so that their scope of activities may be widened. —*Editor*

Identification

The gifted pupil of to-day must be identified and expertly guided early in life, so that he may become of maximum value to himself, to his community and society. The education of the gifted pupil must be planned with the keenest and most intelligent insight, as the proper development of such personnel is essential to the welfare of the nation. To educate its best youth to their full capacity presents supremely important opportunities and problems, to which education in our country has so far given only meagre and sporadic attention.

Gifted children differ from the less able children of their own age mainly in possessing a greater potential for learning. Research shows that versatility rather than one-sidedness is the rule among them and that superiority in academic work is one of their characteristics. In character and personality too, the bright pupils average above and general child population. The formal methods of identification of a gifted pupil are generally by standardized tests while informal methods of identification are the discovery of his unusual or extra-ordinary memory, intellectual curiosity, persistence in worthwhile behaviours and the ability to do abstract thinking and to apply knowledge.

Role of the Teacher

Probably the most important factor in stimulating student interest in science courses is the teacher. Science teachers hold the key to the vast reservoirs of raw materials from which future scientists and engineers are fashioned. The brighter ten percent or so in a given class are usually bored, the brightest even more bored. Unless the teacher is unusual, the

pupils are generally left to work in materials much below their level of interest. The problem before the teacher is how to provide for individual differences in a mass education programme. Even rural schools hold possibilities for enriching the programmes for pupils with special ability and for fostering their interests and talents.

Activities for the Gifted

All pupils including the gifted should spend a major portion of their school life on the general studies that will help the individual achieve and become proficient in the general objectives of education. Beyond these general studies designed to develop the common needs of all, the gifted pupils should have additional experiences appropriate to their special needs. Specific suggestions to direct the gifted to a wider range of activities than other pupils include the following :

(1) *Class-room and Laboratory Demonstration*

Science and experimentation cannot be separated from each other. The teacher should impress upon gifted children that experimenting is the most effective method of securing answers to problems. As curiosity plays an important part in the child's life, the demostrations presented to the class should be impressive so as to arouse the pupil's curiosity. The teacher may counsel the talented child to try simpler experiments first and then proceed to more difficult types. In this manner the pupil would gain a sense of accomplishment every time he finishes an experiment.

(2) *The Science Museum*

Talented pupils can be made to take over the care of a science museum in the school, collecting, identifying, labelling specimens and arranging and displaying them. This will give them a sense of healthy pride in maintaining things clean and up-to-date. The organisation of the museum should be done under the supervision of the science teachers who can make it an integral part of their work.

(3) *Aquarium, Terrarium and Vivarium*

In the biology class, the talented pupils can plan and prepare a small aquarium, a terrarium or a vivarium. It is one of the means to inculcate in the students the habit of keen observation. The wise teacher will recognise and stimulate the natural desire of children to explore, to question and to experiment and direct their eager curiosity into worthwhile learning activities.

(4) *Laboratory Squads*

Talented children may be organised into squads and placed in charge of cleaning microscopes, preparing solutions, washing apparatus, arranging,

labelling and handling new apparatus. This would give them a great deal of satisfaction and confidence.

(5) *Assistance to Below-Average Pupils*

Talented pupils may also be made to assist the average or below-average pupils of the class in their classwork or in their laboratory activities. Specially interested and trained high school pupils often assist in the elementary or middle school programmes and in setting up spectacular demonstrations to interest other children.

(6) *Current News in Science*

One period a week may be devoted to a discussion of current events in science, when the gifted pupils present to the class newspaper clippings on scientific topics or read out articles of scientific interest. This helps to build up and maintain interest in current progress in science.

(7) *Science Clubs*

Talented pupils may be encouraged to organise various types of science clubs such as the biology club, the birds' club, camera club, chemistry club etc. These clubs will function under a science sponsor and their programmes will provide opportunities for superior talent to express itself. Activities of the science club may include the preparation of charts, diagrams, posters and models ; the maintenance of a science bulletin board ; compiling albums of short biographies of scientists ; care of the school garden; making improvised apparatus ; arranging excursions and field trips; arranging science exhibitions; celebration of science day or birth days of eminent scientists and organising and running a science library, etc.

(8) *Science Camps*

Science camps may be conducted during summer or other holidays with one or two regular staff members. The groups should be small and comprise of responsible pupils. The students who will attend these camps will have field trips, demonstrations and informal discussions with the science teachers.

(9) *Attending Science Meetings*

It is possible for the pupils in large cities to attend lectures and discussions or visit exhibitions on science. The talented pupils should be encouraged to attend such meetings and present special reports to the class about their visits.

(10) *Community Service*

Talented pupils can also serve the community through the school, in a variety of ways such as participation in health compaigns, conservation projects, survey of local trees etc.

(11) *Extra Activity Sheet for the Gifted*

The gifted pupils should be encouraged to report their extra scientific activities each month, such as the books they read, field trips in which they have participated, exhibitions and demonstrations in which they have assisted, radio programmes to which they have listened, and interviews if any, which they may have had with scientists. Extra credit should be given forthese activities, so as to serve as an incentive to do more work. The value of such a sheet will lie in the fact that it will encourage supplementary reading, observation, experimenting, class participation and group work.

(12) *Resource Personnel*

Additional resource persons should be made available to assist and counsel the talented students in their specific projects. Science teachers too often have a crowded schedule and have little time or energy left to assist the able students in their special needs. In other instances the teachers themselves might not have had sufficient experience in directing and organising projects so that they are unable to be of much help to the students. In such cases resource persons from industries, colleges and universities, would be of much assistance to both students and teachers.

Conclusion

It is essential that science teachers should actively participate in guiding and working with talented pupils. When the gifted pupil of science has the confidence and support of the teacher or another professional person whom he admires, he is sure to make a spurt forward in scientific study and in advanced professional work in science. What the science teacher needs is confidence and faith that the future stature of our nation depends upon the right education of our gifted pupils.

Bibliography on Educational Evaluation

Our readers may recall that a preliminary list of essential reference books on Evaluation was published in the issue of October 1959, following which we have also been bringing out brief digests of some of the books mentioned in that list. Secretaries of Boards of Secondary Education, teachers and others interested in examination reform have been expressing the need for a fuller bibliography on the subject. The Examination Unit of the Directorate has accordingly compiled a comprehensive bibliography on evaluation which we publish below. The books listed cover evaluation in general as well as evaluation in Mathematics, Science, Social Studies and English. Books on teaching methods and content have also been included wherever they have a direct bearing on a better understanding and application of the evaluation concept. We hope our readers will find the list useful both in gaining a wider and deeper knowledge of the subject and in building up a reference library on the subject in their institutions. —Editor

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Book Reviews

Experiments and Exercises in Physical Science : Robert Maurer & Konrad B. Krauskopf. McGraw-Hill Book Company, Inc., New York, Toronto, London.

The teaching of 'Physical Science' in place of Physics and Chemistry as separate subjects in senior classes of secondary schools is relatively a recent development in certain advanced countries. The new course in which is fused subjects like Astronomy and Earth Science in addition to Physics and Chemistry, is a good compromise for providing general education in different branches of science to pupils who have completed the General Science course at the junior level.

The present publication is a laboratory manual keyed to the fourth edition of the text book entitled "Fundamentals of Physical Science' by Konrad B. Krauskopf. The authors, however, believe that the manual could be used as a workbook of experiments and exercises along with other textbooks of Physical Science.

As many as forty sets of assignments consisting of carefully designed exercises, demonstrations and experiments are incorporated in the manual in addition to forty-seven others which are appended at the end of the book as report-sheets. The assignments are based on selected important topics from the areas of Astronomy, Physics, Chemistry and Earth Science and provide effective learning activities to pupils. The necessary reference material, logarithms, periodic tables, etc, also form useful appendices.

The questions suggested for home and class assignments are thought-provoking and such as would develop in pupils the ability to apply principles and interpret data. Other exercises are likely to help pupils develop various skills such as classifying data, designing experiments, manipulating with scientific instruments and appliances and so forth. Such assignments. if regularly carried out by the pupils are bound to foster habits of self-study, critical thinking and auto-evaluation.

In spite of the value of the manual in providing fruitful activities to pupils, its utility is likely to be rather limited In the secondary schools in India for several reasons. First, the pupils in our higher secondary schools study Physics and Chemistry as separate subjects and not as a generalised subject called Physical Science. Secondly, the fact that the medium of instruction is the regional language in most of our secondary schools considerably restricts the pupils' use of this manual.

Nevertheless, it is bound to serve as a rich reference material for teachers of Physics, Chemistry and General Science. They may obtain from it good samples of pupil assignments and suggestions for preparing similar assignments for home and laboratory work.

For an effective teaching of science such Manuals and Workbooks accompanying textbooks are useful aids and help the teacher to provide a variety of learning experiences to pupils. A series of such work manuals if made available to the schools at

reasonable cost and after careful try-out, will prove effective as potent material for teaching science.

(R.H.D.)

Statistical Analysis in Psychology and Education : George A. Ferguson : New York, McGraw Hill-Book Co., Inc. 1959.

This is a book on statistics intended to introduce the concepts and techniques of statistics to students and research workers in psychology and education, but is almost equally suitable for investigators in any of the allied social sciences or medicine. It would be useful as a textbook for a full one-year course in statistics but the earlier chapters could also be used for a briefer introductory course.

The first chapter is a discussion of some basic ideas in statistics, such as the role of quantification in psychology, population and sample, parameter and estimate, variable and constant, dependent and independent variables, continuous and discrete variables, nominal, ordinal, interval and ratio variables, etc. The author discusses these at greater length than is usual in introductory texts. The treatment of frequency distributions, their graphic representation, measures of central tendency and measures of variability, is much the same as found in other introductory texts, except that the concepts of skewness and kurtosis are presented separately from techniques of measuring these, the former being included in the chapter on frequency distributions and the latter in the chapter on measures of variation. This makes for lack of clarity. In the first place, the concepts presented so early, and before the student has acquired some understanding of the shape of the normal distribution, may not be very meaningful. Secondly, the author plunges directly into the computation of skewness and kurtosis without making the slightest reference to the concepts, whereas it is quite likely that the concepts, even if grasped earlier, may not be fresh in the mind of the reader at that point. Also, it is unfortunate that the measures are derived from moments, since the concept of moment is rather difficult to grasp and not very useful, and hence is often rightly excluded from introductory courses in statistics.

An entire chapter has been devoted to explaining the nature of probability. Probability is discussed from three approaches : (1) The subjective or personalistic, (2) the formal mathematical, and (3) the empirical relative-frequency approach. The chapter on the normal probability curve ends with a summary of the properties of this curve, which is helpful

The exposition of the concept of correlation and various techniques of computation is quite adequate. In the chapter on rank correlation the author describes an alternate form (tau) developed by Kendall. This may be of interest to the professional statistician but is of no practical importance to the student of psychology or education and, in fact, is likely to cause confusion and dismay in the latter.

Sampling errors and sampling distributions are discussed in simple terms. The problem of estimating error has been approached experimentally, i.e. the author has brought in the actual drawing of a number of samples and approached the experimental study of error through observed sample-to-sample fluctuation ; as well as theoretically, i.e. using the theory of probability. The treatment of prediction, tests of significance, and chi-square, is quite adequate.

A very commendable feature of the book is the bringing together in one chapter, entitled "Transformations : Their Nature and Purpose", of various types of scores used in mental measurement, viz. percentiles, standard scores, T Scores and stanines. Regression transformations and transformations with age allowances are also dealt with.

Of interest to fairly advanced students, and particularly to research workers, are the last five chapters of the book. Two of these treat of analysis of variance, including the two-way classification, with illustrative examples. The chapter on errors of measurement includes an exposition of the nature of error and the effects of errors of measurement on sampling statistics, including a section on the reliability of psychological tests. A separate chapter is devoted to selected nonparametric tests. The exposition of partial and multiple correlation is brief and not very satisfying.

Professor Ferguson includes some exercises at the end of each of his chapters. Ten tables are placed in the appendix. A glossary of symbols and a short list of references is also added.

On the whole, this is a good text-book on statistics for students of psychology and education, but it is not very different from other such text-books.

[Perin H. Mehta]

"Modern Mathematics : Topics and Problems" by Daymond J. Allen and Charles A. Beseman. McGraw-Hill Book Company Inc. New York 1959 pp. 140.

The book presents about 800 problems covering a wide range of topics such as the introduction to sets, universe and variables, conditions and solution sets, the number line, ordered pairs and conditions with two variables, functions, intersections of sets, union of sets, set operations and first motion in statistics.

To one who is familiar with modern mathematics it will be clear that these topics cover concepts basic to the study of the subject. The term 'modern mathematics' may seem confusing, for the content of the present day mathematics course even up to the degree level is almost the same as it was a century ago, and we are not quite aware of any change in the age-long mathematical vocabulary and notations. A student of mathematics at the graduate and post-graduate levels no doubt gets acquainted with much of the new terminology but this knowledge does not seem to contribute to the reorganisation of mathematics at the lower levels. That is why mathematics still tends to be taught in the traditional way, where the subject is treated not as a system but as a heap of isolated bits of knowledge. In modern mathematics on the other hand, the accent is on the systems of mathematical thought. Knowledge of 'sets' and similar mathematical concepts help students to understand and unify the larger ideas of Algebra on which is built the edifice of mathematics. Although the terms of modern mathematics like 'sets', 'universe' etc may be new to many of us, the ideas are not. The word 'set' sounds unfamiliar but when it is defined as 'any unambiguous collection of objects' such as the 'set' of all towns whose names begin with 'A' or the 'set' of prime numbers up to 30, it is easily understood. The same is true of other concepts and notation. So one need not be scared away by the idea that modern mathematics is something foreign to a student of mathematics

The book is an excellent aid to a mathematics teacher in getting familiar with the ideas given through a preliminary course in modern mathematics. It will serve as a very useful guide to teaching Algebra at the secondary stage in a more meaningfu way.

A careful reading of the book will help discover a number of ways to integrate the topics discussed in it with the courses in school Algebra. The authors of the book have detailed in the preface how this may be done. For example, topics 1 and 2 can be

logically taken with the use of letters for numbers, topics 3 with equations, topic 4 with directed numbers, topic 5 with graphs and so on.

The content of the book has been presented in a very well-thought-out manner. The basic concepts covered in each topic and the notations used have been explained and illustrated in the beginning in the simplest possible way. These are followed by a number of problems drawn from a variety of situations which exemplify the fact that mathematics is a mode of thinking and not a mass of figures for developing mechanical and manipulative skills. Topics 2 to 4 are followed by review exercises under the heading "Show that you know".

It is not a basic text book but a supplement to offer ample practice material. For a thorough knowledge of modern mathematics one may read a few books given in the bibliography. The vocabulary and the notation used in this book have not yet found their way into the prescribed school text and this fact may not perhaps attract teachers to this book. But familiarity with the concepts would certainly enable teachers to teach mathematics, especially Algebra, with rich dividends. The book is recommended to be used as a valuable reference book by all mathematics teachers.

(H.M.D.)

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Editorial

The term 'guidance' has come to mean different things to different people. To some, it is synonymous with psychological tests; to others, it is vaguely connected with avenues of employment. There are some who associate it with only backward pupils. There are others —and fortunately this number is growing less day by day—who look upon guidance as yet another trying experiment foisted upon long-suffering teachers and parents by an overzealous tribe of educational reformers.

However, guidance is neither a fad nor a fancy name for testing. It is an intricate part of the process of education itself. Education today is concerned with the development of the whole child; with the all-round growth of his intellectual, physical, emotional and social qualities. Guidance in the school programme seeks to help the child to overcome obstacles in the way of his full development. So it must go hand in hand with the process of education if the goals of education are to be satisfactorily achieved

Secondary education today has to provide a liberal education for all pupils, education for employment for the majority and education for leadership for a talented few. Guidance work in the secondary school has to be geared to these different purposes—the more so because the growing child in India does not get adequate assistance either from his parents or from the community, in tackling the many problems that confront him in the changing society of today.

In preparing school-leavers for work and life, guidance is almost as important as the imparting of instruction or the measurement of achievement. It is an educational activity that serves to improve each step in the school process—selection of objectives, selection content and the organisation of learning experiences.

Giving it due recognition, the State Governments of Uttar Pradesh and Bombay established Bureaus of Psychological and Vocational Guidance in 1947 and 1950 respectively. After the Secondary Education Commission had strongly advocated the introduction of guidance programmes in schools, the Ministry of Education set up the Central Bureau of Educational and Vocational Guidance in 1954. By 1959 one by one, the State Governments of Orissa, West Bengal, Rajasthan, Madhya Pradesh, Assam, Andhra Pradesh, Mysore and Kerala also set up their State Bureaus.

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Thus with the establishment of a Central Bureau to guide and co-ordinate the movement, and of State Bureaus to adapt the guidance programme to their special requirements, the machinery for taking guidance services to the school is already working. A number of States have provided talks on guidance and careers, and have made a beginning in disseminating occupational guidance information in schools Guidance personnel of one category or another, have been appointed in some secondary schools in Bihar, Madhya Pradesh, Maharashtra, Uttar Pradesh, West Bengal and Delhi, but the majority of schools still do not have specialists for guidance work. The main difficulty in speeding up this essential programme is the lack of trained personnel in this field. This drawback will be partly remedied in the Third Five Year Plan which includes provision for training facilities for counsellors, teacher-counsellors and career masters. The Central Bureau with the assistance of State Directorates and training colleges is expected to organise training courses of six to nine months for counsellors, and of nine months, followed by a three-months apprenticeship at the State Bureaus, for the field counsellors, who will each supervise and assist the work of counsellors and teacher-counsellors in a group of fifteen multipurpose schools. According to the scheme, there will be a full-time counsellor in every multipurpose school that has three or more elective streams, and a part-time counsellor for those with less than three. High and higher secondary schools will have career masters wherever possible.

The provision of a minimum programme of guidance services in all the 1500 multipurpose schools and of occupational information services in all higher secondary schools in the country in the Third Five Year Plan is a step that enlightened parents and teachers will surely welcome. As envisaged at present, according to the Plan, cumulative record cards will be maintained for all pupils in classes VI to XI. There will be an occupational information corner in each multipurpose school and class talks on aspects of guidance work; and orientation talks to parents of boys and girls in class VIII and individual counselling in both classes VII and XI. Projects and investigations on behaviour problems will be undertaken by the trained guidance personnel who will endeavour to associate parents with the task of solving problems that face their children. If parents could be persuaded to co-operate actively in these projects, a favourable climate will be created for the specialist in guidance to do his work more effectively.

In higher secondary schools also, it is proposed to introduce the maintenance of cumulative record cards from class VI to XI and talks on the vocational implications of the education courses provided in the school. Groups of schools in one area will jointly hold career

conferences annually and discuss problems and programmes to improve counselling in vocational subjects.

These minimum provisions will bring about a certain measure of uniformity in the nature and scope of the guidance services set up in the secondary schools. But the effective utilisation of these services depends upon two things—the attitude of the specialist in the field, and the attitude of the non-specialist also, which category includes a vast number of administrators, heads of schools and teachers as well as the majority of parents. It will be a part of the counsellor's difficult task to find convincing methods to dispel the attitude of mind revealed by an exasperated senior teacher who burst out with obvious sincerity: "When will we be rid of this botheration of cumulative record cards?" It is of utmost importance for the success of the scheme that parents and educators should be made to realise through talks, brochures and through practical methods, that guidance services conducted on a scientific basis, help children to get the best out of their school education. The State Bureaus of Educational and Vocational Guidance and the Vocational Guidance units of the Directorate-General of Resettlement and Employment would be the main sources of inspiration to the guidance workers in this task. The measures outlined above, will, to some extent, make guidance available on a scientific basis to a large number of secondary schools in the country and thus effect a qualitative improvement in secondary education.

Extension Services Newsletter

The reports of June and July have been combined in this newsletter.

North-Western Zone

The Department of Extension Services, Jullundur, organised a meeting of the Amritsar Science Teachers' Association to plan out a week's course in general science (astronomy and agricultural units) to be held at Amritsar. Twenty-five teachers attended the course. At another meeting of the same Association, the organisation of science clubs in secondary schools was discussed. The Jullundur Science Teachers' Association held a meeting in which Shri J. C. Behal of the Government Model Higher Secondary School illustrated the various steps that have to be taken to construct a model of a dynamo. Hindi, Punjabi and Social Studies Teachers' Associations held meetings in which they discussed the syllabus of the higher secondary classes and the difficulties experienced in the teaching of the subjects. In another meeting of the Science Teachers' Association, Smt. Kamla Mittal of the Government Girls' Higher Secondary School discussed the construction of a sun-dial. The Audio-Visual Unit of the Department has completed a film-strip on 'Animals in India' and is preparing two others—'Wonders of the World' and the 'World's Best Photographs.' The library services to the schools continued as usual.

The Department of Extension Services, Chandigarh, conducted an orientation workshop on evaluation and testing procedures for the lecturers of training colleges. Three Evaluation Officers of this Directorate and 19 lecturers in social studies, the mother tongue and mathematics attended the workshop. Also the Department organised, in collaboration with the Central State Film Library, a 4-day training course in audio-visual education for 19 local teachers. A 4-day convention of teachers of local basic schools organised by the Department at Nangal was inauguarated by Pt. Amarnath Vidyalankar, State Education Minister, and was attended by 120 teachers. The participants discussed the fundamental aspects of basic education including correlation, self-sufficiency in basic education and free and compulsory education. A meeting of the Chandigarh Teachers' Association, attended by 47 teachers, discussed various school problems particularly school projects and the Home Room Scheme. Headmasters and senior teachers of the area met in a four-day annual meeting organised by the Department at Kandaghat. The meeting was inaugurated by the Deputy Minister of Education, Shri Yash. The participants discussed the 'school of tomorrow,' experimentation in schools, improving higher secondary education, new techniques of teaching, individualisation in education, plans for the future of the Extension Services Department

and the teachers' pledge. The Co-ordinator visited several schools during the period and discussed with the staff school problems such as maintenance of cumulative records, wall magazine and the steps to be taken for improving general knowledge among the students.

In a 7-day workshop for art and craft teachers, organized by the *Department of Extension Services, Patiala,* 25 teachers were given practice in the use of papier-mache, plaster of paris, clay, plasticine and other media for preparing models. The Department also organised a 3-day seminar in which 40 heads of schools discussed the organisation of guidance services and of extra curricular activities, teaching of general science, the improvement of students' handwriting etc. A meeting of the study circle of Hindi teachers was held in which a talk was given on objective tests for Hindi. The Co-ordinator stressed the value of study circle meetings in his visits to schools.

The Co-ordinator of the *Department of Extension Services, Ferozepur,* arranged staff meetings in four schools associated with the Department, to discuss the implementation of some educational projects. The Department organised a 4-day workshop in which teachers of general science discussed the following:—

(1) the flower; its various parts and their functions; pollination.

(2) the basis of life cell—its structure and its functions

(3) sound.

(4) atomic energy.

(5) rocks, earth and metallic minerals.

The problems of education in a changing society and the teachers' role therein were discussed at a symposium organised by the Department on education and dynamic society. The Co-ordinator visited 10 schools and discussed educational and administrative problems and the staff of the Department visited Fazilka, Abohar, Malout and Bhatinda and organised seminars on democratic administration, modern trends in education and on beautifying schools.

The Department of Extension Services, Udaipur, arranged a meeting of the members of the staff of the Government Multipurpose Higher Secondary School, Chittorgarh, to discuss the progress of the project on the reform of the whole examination system. The members planned their work on the project for the next session. The Department also arranged a workshop for 26 science teachers at Chittor. The participants prepared a hundred pieces of apparatus for teaching science effectively at the secondary stage. In a workshop on evaluation conducted by the Department, 39 teachers worked out the objectives of teaching various subjects at different stages and also planned, in specific terms, the behaviour changes expected.

The Co-ordinator visited six schools to discuss with the members of the staff, the projects which the schools had planned for the coming session and also delivered lectures on the construction, administration and organisation of new type tests in various subjects. He also visited

three schools regularly along with some of the college staff to help the teachers individually in the construction of new type tests in their own subjects.

In a 5-week training course for art and craft teachers, organised by the *Department of Extension Services, Bikaner,* 86 teachers were given theoretical and practical training. The Department also held a 3-week training course in library organisation for 60 teachers of local schools when practical work was arranged for the trainees. Another 4-week training course for the teachers of general science was organised on the special request of the Department of Education, Rajasthan. Through demonstration lessons and practical laboratory work the participants received training in the theory and methods of teaching general science as well as in the preparation of improvised teaching aids. Meetings of the Advisory Committee were held to discuss the plan of activities of the Department. The Co-ordinator visited three schools and explained the objectives of the Extension Services Department to the teachers and discussed with them the activities planned for the current session.

The Co-ordinator of the *Extension Services Department, Jamia Millia Islamia, New Delhi,* helped the Delhi Municipal Corporation in the organisation of an orientation course in basic education for the heads and teachers of non-basic schools. He spoke on 'Co-operation between Schools and Community.' The craft lecturer of the Teachers' College helped the participants to make different cardboard models. He paid visits to 7 schools in his area to identify general problems with which the teachers were confronted and the help that the Extension Services Department could give in their solution. The Department held an exhibition of several films and film-strips for the teacher-trainees of the Teachers' College and is also conducting an enquiry into the needs of the schools in regard to the teaching of craft. A suitable programme would be evolved after the collection of the necessary data.

Dr. (Mrs.) M. Koshy, Vice-Principal of the Central Institute of Education, Delhi, directed a seminar on "Mental Hygiene and the School System" which was arranged by the *Department of Extension Services of the C.I.E., Delhi.* Twenty-three participants attended the course.

Northern Zone

The Department of Extension Services, Government Constructive Training College, Lucknow, invited teacher-librarians of various schools to the Department for a course in which talks and film-shows were also given. The Department organised a 7-day seminar for the principals of higher secondary schools. Twenty-five persons participated and discussed the following topics: (i) creating and developing the reading habit; (ii) maintenance and use of cumulative records; (iii) educational guidance and how to provide it; (iv) science clubs in secondary schools.

The participants decided to set up a sub-committee to draw up a form of simplified cumulative record card.

The Department of Extension Services, Isabella Thoburn College, Lucknow organised a 10-day workshop on Physical Education. Miss L. Wallace, Head of the Department of Physical Education of the College, presided over it. Emphasis was laid on the techniques in games, track and field events and in the teaching of such exercises as could be organised where the space was limited and the number of pupils large The Department issued a questionnaire on craft teaching. Further activities in this subject will be planned after the replies to the questionnaire are received.

A 14-day course on the teaching of English was arranged by the *Department of Extension Services, Aligarh* for fifteen teachers of junior high schools of Aligarh District. The programme consisted of lectures, demonstration lessons, speech training, group discussions etc. A test was given at the end of the course. The Department has completed a comprehensive assessment of the working of the science clubs within its area.

The Committee of three persons appointed by the Department to visit the science clubs felt that although some were doing good work, the time allotted for their activities was not sufficient. The library services of the Department were continued as usual.

The Co-ordinator of the *Department of Extension Services, Varanasi* helped in the organisation of evaluation workshops in science and Hindi, sponsored by this Directorate. Fourteen lecturers of training colleges in U.P. and M.P. attended this workshop. Also a 10-day seminar-cum-workshop for teachers of spinning and weaving was arranged and was attended by 13 teachers from the Varanasi and Gorakhpur regions. The Co-ordinator visited nine schools in the city and in the mofussil areas to acquaint the teachers with the aims and activities of the Extension Department It is hoped that these contacts would be fruitful for the future work of the Department.

The *Department of Extension Services, Jabalpur,* helped in the organisation of a short training course attended by 107 untrained lecturers of the higher secondary schools of all parts of M P. to acquaint them with the broad principles of education, pedagogy and psychology so that they might do their teaching work more efficiently till they are deputed for regular training. Film-shows were arranged on the occasion of the course. Also the Department started a 3-month course in audio-visual education for 20 trainees. The classes meet twice a week. In a week-end seminar on the teaching of English held at Damoh, the participants discussed the teaching of grammar and composition and heard talks on the structural approach to the teaching of English. The Department arranged a discussion on the subject for the staff of the D. N. Jain Higher Secondary School, and showed them a film on the 'Maintenance of Classroom Discipline' The Honorary Director of the Department presided over a meeting of the principals' forum at which 'The Position of Craft Teaching in

Secondary School' was discussed. A sectional library of the Extension Department was opened at the Government M.P. Higher Secondary School, Damoh for the use of local teachers, and the other services were maintained as usual.

The Department of Extension Services, Allahabad, organised a 6-day workshop for mathematics teachers, to orientate them in the new concept of evaluation. The seven teachers who participated, considered the possibilities of introducing an immediate change in the pattern of examination and prepared test items accordingly. Another workshop in history and geography was organised for thirty-four teachers to give them an idea of how to break up the syllabus into suitable teaching units. The Department also conducted a 7-day seminar-cum-workshop of science teachers. The topics discussed were: —

(1) The content of the L.T. or B.Ed. science course.

(2) The steps to be taken to improve the evaluation of the results of science teaching.

(3) The meaning and scope of 'Scientific Method' and 'Scientific Attitudes' in terms of Teaching Practices.

The group also discussed the planning of teaching units of the science club. Six films were screened on the occasion of the Science Teachers' Seminar and a demonstration lesson in the structural approach to the teaching of English was arranged at the Ishwar Saran Inter College, Allahabad. This school has been adopted as an experimental school for the teaching of English at the junior high school stage. The Library and audio-visual services of the Department were maintained as usual.

The Department of Extension Services, Dewas, in collaboration with the Jt. Director of Technical Education, Madhya Pradesh, arranged a seminar on polytechnics, which was attended by 28 principals and teachers from several polytechnics. The participants discussed their problems and acquainted themselves with the principles of administration. A number of talks were also arranged during the seminar. A meeting of the Advisory Committee of the Department was held to consider the various helpful suggestions received with regard to the further programme of the Department.

The Departmnet of Extension Services, Raipur, arranged two exhibitions, one of the student art work drawn from American Educational Institutions and the other of the publications of the Government of India, the British Council and the USIS, Bombay, about 500 periodicals too, also formed a part of the exhibition. A course on "Pronunciation in English" was organised by the Department at which teaching of correct English pronunciation was explained to the participants. The Department also conducted a symposium on 'Discipline in schools'.

The Co-ordinator of the Department of Extension Services, Agra, visited a number of local schools and consulted the inspecting officers in order to finalise the programme of activities of the Department for

the current session. The Department also started a speech training class. Through the generosity of the United States Education Foundation in India, the B.R. College of Education has been fortunate in obtaining the services of Mrs. Mabelle B. Nardin, an expert on the teaching of English.

Eastern Zone

The Department of Extension Services, Cuttack, arranged a Career Masters' Training Course for a period of two weeks. The Department also organised a one-week refresher course on the teaching of Mathematics for 38 teachers. The course included a general discussion on the syllabus and methodology and individual problems related to the teaching of different branches of Mathematics. Four demonstration lessons were given during the course Fifty participants attended the seminar of headmasters and headmistresses of high/higher secondary schools associated with the Extension Department and selected four out of several new projects discussed for trying out during the current year. The Co-ordinator visited the science clubs of Asureswar and the R.C. School and nine other schools including two in the rural areas, and observed the teaching work and discussed with the members of the staff measures to improve teaching practices.

A four-day seminar on the teaching of Hindi was organised for the participants of the short training course by *the Department of Extension Services, Patna.* and nine film-shows were arranged for the trainees of the course and the participants of the science teachers seminar.

The Department of Extension Services, Bhagalpur, organised a five-day course on Sanskrit for the teachers of the short training course. The Co-ordinator attended meetings of the teachers of the Adarsh Balika Vidyalaya, Bhagalpur, and the Government Girls' High School, Nathnagar and gave them guidance on projects for class libraries (for class VIII) and study circles. A course-cum-demonstration in Physics, attended by 18 teachers, was organised by the Department at the Zila School, Monghyr. A similar course in geography was organised at Basudeopur. A demonstration lesson was given in class IX on the Damodar Valley Project. The Department lent books to three local schools and screened films for the teachers of basic and middle schools of Bhagalpur Division who had come to attend the English seminar Audio-visual aids such as the tape-recorder and the record-player were lent to the participants of the English seminar. The Co-ordinator gave five talks to the participants of the short training course on Democracy in Education. New Trends in Education, In-service Training of Teachers, the Organisation of Secondary Education and Discipline in Schools. He visited six schools to assess the activities of the science clubs. Films were shown in four schools of Bhagalpur and Monghyr

Nineteen teachers participated in the course on the use of audio-visual equipment organised by the *Department of Extension Services, Turki.* They were made acquainted with the use and operation of different audio-visual equipment. The Department also organised a

seminar attended by 26 teachers, to discuss ways and means of making the teaching of science more interesting and effective. The Co-ordinator gave a demonstration lesson observed by 30 teachers of different schools. He gave talks on 'The Place of Religion and Moral Teaching in Secondary Schools,' Action Research, Group Dynamics, Schools and Community and 'Nation Building Activities in Schools.' Nearly 100 teachers attended these talks. The Department organised a seminar on social studies at Kumarbagh. Twenty-three teachers participated and discussed both theoretical and practical aspects of the teaching of social studies, as well as the use of new evaluation techniques. At a conference of the headmasters of senior basic schools convened by the Department and attended by 44 persons, a Research Unit was formed At the invitation of the District Education Officer, the Co-ordinator gave a talk on group dynamics at the seminar of the headmasters of schools in the District. The Co-ordinator also visited a number of schools at Pusa, Darbhanga, Muzaffarpur and others for guidance services.

An intensive 8-day refresher course in Bengali for the teachers of higher secondary courses was organised by *the Extension Services Department, Hooghly,* Calcutta and attended by 20 teachers including six women. Special emphasis was given to the teaching of Bengali rhetoric (Alankar) and the History of Bengali literature. In another intensive 10-day practical course in chemistry arranged during the same period in the afternoons, the participants were taken through practically all the important experiments in the new syllabus. Detailed instructions for laboratory experiments were also distributed to them. The Department organised an eight-day seminar in social studies in which 24 teachers from 20 associated schools participated. Five interest groups were formed which discussed (a) courses of study, (b) methods of teaching, (c) planning of units, (d) evaluation, (e) reference materials. Another seminar on economics and civics was arranged for nine days for the benefit of 16 teachers. The participants worked on (a) objectives and learning experiences; (b) methods of approach and teaching aids; and (c) evaluation and preparation of specimen evaluation tools. The Co-ordinator visited eight schools in his area for the organisation of the Bengali Teachers' Association, introducing books from the Mobile Library service of the Department.

The Department of Extension Services, Santiniketan, held a 10-day vacation course in woodwork, attended by 12 craft teachers and several recommendations were adopted for more effective teaching of the subject. The Co-ordinator addressed the new student-teachers and showed them a film on 'Santiniketan and its Institutions.' The Department organised a discussion on hobby clubs and a seminar on gardening as a craft. The latter was attended by 26 participants. The Co-ordinator took a party consisting of headmasters and the headmistresses of a few high schools to the Sriram High School, Avinashpur, where the visitors were shown the organisation of the school, the equipment of the laboratories and the geography room. They also had discussions with the headmasters and

the senior members of the staff with regard to the programme of intensive work. The Department maintained its audio-visual and library services as usual.

The Department of Extension Services, Institute of Education for Women, Calcutta conducted four two-week training courses in English, psychology, economics and the maintenance of cumulative record cards. The course in English was conducted with the help of the British Council. The State Bureau of Educational and Psychological Research helped in the organisation of the course on the maintenance of cumulative record cards. The Department continued to guide the experiments in the teaching of social studies and English at the Chetla and Chittaranjan Girls' High Schools. The Co-ordinator also discussed matters concerning craft and general education with the members of the staff of the Nari Shiksha Niketan. She also gave a demonstration lesson in English at the Sakhavat Memorial Girls' High School. A meeting of the Advisory Committee of the Department was held during the period under report.

The Honorary Director of *the Department of Extension Services, David Hare Training College, Calcutta,* conducted an evaluation workshop on English and Mathematics held under the auspices of this Directorate. The Department organised a refresher course in geography for 45 teachers drawn from different schools of West Bengal. The participants, who were divided into four different groups, prepared a series of objective tests for classes VIII to XI. They were also given facilities for doing intensive practical work in the laboratory. The Department continued the part-time music course which is being attended by 20 teachers of the local schools. The syllabuses in Bengali and in general science in the higher secondary and high school classes were critically studied by the Bengali Teachers' Study Circle and a group of general science teachers respectively. The teachers of social studies in local high schools discussed at their monthly meeting the topic, "Derozi and the Young Bengal." The Co-ordinator discussed with the teacher-trainees of the college, the organisation of the science clubs in the schools and suggested ways of making science teaching more effective. He also visited a number of schools in connection with follow-up activities.

The Honorary Director of *the Department of Extension Services, Ranchi* along with the Co-ordinator, attended a seminar of teachers of basic and middle schools and spoke to the participants on the teaching of English and visited Bikash Vidyalaya and Kanke Sarvodya High School to discuss with the members of the staff the activities of the science clubs. The Hony. Director also visited the Doranda Boys High School and advised the staff to make use of the library and audio-visual services of the Department. A meeting of the local Advisory Committee was held to discuss the programme of the future activities of the Department. The Co-ordinator visited local Government Girls' High School. The audio-visual and library services of the Department were maintained as usual.

Central Zone

The Department of Extension Services, Kurnool, conducted three evaluation workshops in Mathematics, Science and Hindi as a foreign language; in each the participants worked out the objectives and the learning experiences in detail for various units. Suggestions were made for overcoming the defects in the present teaching procedures. The participants of the Hindi workshop worked on a teacher's guide book for class VI. The Department also collaborated with this Directorate for organising a workshop on modern evaluation techniques for lecturers of training colleges to discuss the concept of evaluation, the criteria for a good objective, learning experiences, item analysis etc., as well as to survey the scope of internal assessment and the academic and administrative problems arising out of the introduction of the new approach to evaluation in the training college work.

A nine-day workshop attended by 21 teachers of art and craft was organised by *the Department of Extension Services, Warangal* to train them in preparing teaching aids. A large number of aids such as pictures, charts, water colour and oil paintings, flannelograph, cuttings and stories of pictures were prepared. A four-day seminar on the teaching of mathematics, attended by 8 teachers, and another on basic education at Adilabad, attended by 24 teachers, were also organised. The participants identified the objectives of teaching mathematics and suitable activities for developing appropriate skills, attitudes, aptitudes and interests; the place of books and crafts and the technique of correlation in basic education. Ten science teachers participated in a 7-day seminar on the organisation of science clubs and discussed their aims, organisational pattern and the list of activities to be undertaken by them. The Department organised educational exhibitions in three schools. The Co-ordinator visited three schools and discussed with the teachers the need for starting experimental projects.

The Co-ordinator of *the Department of Extension Services, Hyderabad* participated in a conference of headmasters of high, higher secondary and model schools of the Medak District, convened by the Zila Parishad to discuss mainly two questions, namely (a) the manner of elections to students' associations in schools and (b) the disciplinary action against teachers. The Department organised a three-day seminar for the sponsors of 12 science clubs in the area to review the work already done and to discuss the future programme of activities. About 40 teachers from 20 schools in Hyderabad attended a conference to discuss a 10-point programme for the improvement of secondary education with special reference to the staff study circles and the teaching of English. The Association of Science Teachers organised a talk on the teaching of science in multipurpose schools On his visits to schools, the Co-ordinator discussed the value of in-service training as well as the supply of TCM material, with the members of the staff.

The Co-ordinator of *the Extension Services Department Ahmedabad,* visited a number of local schools and discussed with them plans for the programme of curricular activities, the continuation of projects already in hand, intensive work in schools, co-curricular activities and problems pertaining to the teaching of English. The Department organised two workshops for the teachers of Saraswati High School and Shreyas. Sixty-four teachers of the Saraswati High School attended the three-day workshop organised in the school to acquaint them with the new trends in education. Among the novel features of the workshop were the preparation received by the group leaders to conduct different meetings and the introduction of new books to the participants, with the help of the tape recorder. At Shreyas, a 12-day workshop was organised to prepare the teachers for a project undertaken by the institution on 'Community Living in School.' The Honorary Director and the Co-ordinator spoke on the evaluation techniques at the training college of the Vallabh Vidyanagar University. The Department also organised a teaching practice week in 10 schools in the area. The Co-ordinator and the members of the college staff gave demonstration lessons and participated in the discussions which followed. The Co-ordinator also visited nine schools for discussing their specific problems. Another new feature introduced by the Department was the organisation of intensive work in individual schools. In this connection, two workshops each of three-days' duration were arranged in two schools for the teaching of English and the planning of the syllabus in social studies and general science.

The Co-ordinator of *the Department of Extension Services, S.T.C., Bombay,* visited three local high schools for arranging demonstration lessons in different subjects, and presided over a closing function of a six-week orientation course for teachers of English in primary schools. The Department collaborated with the Directorate in organising an orientation workshop on testing and evaluation in English, the mother-tongue and social studies, for 33 lecturers in education from various training colleges. Also a basic printing course was organised for the women-students of the Training College. During the demonstration-lesson week organised by the Department, lessons were given by experienced teachers in Marathi, Gujerati and general science. Attendance at these lectures was between 50 and 60. The Co-ordinator visited two science clubs to assess their work. A meeting of the Managing Committee of the Hindi Teachers' Association, was held at the Department to finalise the programme for the new session. The Department loaned 400 books to 8 schools and supplied teaching aids to schools in the area.

The Department of Extension Services, Rajahmundry, arranged a seminar on the maintenance of cumulative records which was attended by 15 teachers of local secondary schools. While recognising the importance of the record cards the participants pointed out their difficulties in maintaining the records. A five-day seminar on the structural approach in the teaching of English was also organised.

The structure of English, sentence analysis, parts of speech, structural patterns of sentences etc. were the topics discussed at the seminar. In another seminar on the structural method, arranged at M.S.N.C. Multipurpose School, Kakinada, special attention was paid to the teaching of English pronunciation. The Department organised a seminar on the planning of prose lessons in English in lower forms. The Co-ordinator visited several schools during the period under report for advisory and guidance services and discussed with them the setting up of zonal libraries of the Extension Department with additional loan of 50 books per Centre. In one school, he discussed the practical activities which could be taken up in the teaching of social studies in the lower form.

The Department of Extension Services, Poona, arranged a workshop for Hindi teachers of Poona, Ahmednagar and North Satara Districts. Twenty teachers participated in the workshop. A follow-up workshop of Physical Education teachers was also held under the auspices of the Department and was attended by 31 teachers. The Co-ordinator visited many schools to discuss with the members of the staff their classroom problems and the help that the Extension Department could give them. He also assessed the work of the science clubs in 11 schools and gave demonstration lessons at some other schools with the help of film-strips. Ten films and books were lent by the Department to 11 schools in the area.

The Co-ordinator and some staff members of the *Department of Extension Services, Nagpur,* visited most of the local schools to elicit information on the problems faced by teachers and to discuss experimental projects, the teaching of English by the structural approach, internal assessment and the maintenance of cumulative records etc.

The Department of Extension Services. Baroda, organised a number of seminars and week-end courses. Discussions in the teaching of social studies through an integrated approach were arranged at Godra and Dorala. At Lunawada and Devgadhavaria, meetings of teachers were held to discuss the plans of activities for the current session. At a meeting of the language teachers in Dohad, it was decided to undertake two projects (a) the life and work of Premanand, a famous Gujerati poet and (b) the life and work of Dayanand. The Co-ordinator visited several schools in the area. Three hundred books and 42 films-strips were distributed through the library and audio-visual services of the Department.

A four-day seminar attended by 22 headmasters of Ratnagiri District was organised by *the Department of Extension Services, Kolhapur* to discuss problems connected with internal evaluation, the maintenance of a proper standard of discipline and efficient organisation of school and class libraries. The Co-ordinator visited S.H.K. Gujerati High School, Kolhapur in connection with the planning of the English work of the school. Eleven films were exhibited by the Department and 12 films were loaned to the secondary schools in the area.

Southern Zone

A meeting of the Advisory Committee of the *Department of Extension Services, Coimbatore*, discussed the programme of the Department for the current session, and suggested that the Department should arrange for guidance and counselling services, the need of which has become very keen as multipurpose courses are being introduced in almost all the schools. The Department also arranged a week-end course for 32 teachers in social studies and biology. Full use was made of audio-visual aids in the two demonstration lessons and discussions that comprised the course. The participants discussed the 'Ethical Values of Secondary Education.' The Co-ordinator visited three high schools and issued library books to the teachers

The Co-ordinator of the *Department of Extension Services, Madurai*, paid visits to all the local high schools and discussed with the staff the scheme of work for the year, the extension of activities of the Central Science Clubs, the scope of intensive and follow-up work and the exhibition of audio-visual aids The Department arranged a two-day seminar on educational and vocational guidance The programme included talks and discussions on 'Guidance, what it is and what it needs.' The participants also drew up a guidance programme for their schools. The Co-ordinator addressed the members of the Y.M C.A. Madras, on 'Society and Recreation.' On the request of two schools the Co-ordinator gave guidance regarding the science equipment and organisation of museums in the schools. The Department arranged audio-visual shows in two schools and screened nine films.

The Co-ordinator of the *Department of Extension Services. University, Annamalai*, visited all the eight local high schools and few more in the district to discuss with the headmasters a new programme of intensive work in individual schools, that was planned for the current session. The Director and the Co-ordinator discussed the programme of intensive work at the S.K.V. High School, Kuringapadi, with the staff members. The school has also started the group method of teaching English. Dr. G. S. Nutley, Visiting Professor of English, is continuing the English course at the Department; about 40 local teachers are attending.

Under the auspices of the DEPSE, a workshop on Evaluation Techniques was organised for the lecturers of the training colleges at the *Extension Services Department of the Meston Training College, Madras*, under the guidance of the Honorary Director. The new concept that education consists of three inter-related aspects, namely, objectives, learning experiences and tests, was explained to the participants, and it is hoped that this will make training college work more meaningful.

At a 7-day refresher course in English for secondary grade teachers, organised by the Co-ordinator at Vellore, the participants discussed, among other things, the text books for Standards V, VI and VIII and the vocabulary prescribed in the syllabus. The Department

also arranged a school-level evaluation conference at Islamia High School, Parambut. Shri M. D. Devadasan, Evaluation Officer of this Directorate, guided the conference.

The Department of Extension Services, St. Christopher's Training College, Madras, conducted a two-day workshop on museum techniques at Vellore and it was attended by 23 teachers from nine schools. The participants learnt about the various processes for collection and preservation of specimens. A two-day seminar in the teaching of English to pupils of Standards IV and V was conducted by the Department. The teaching of language, skills, pronunciation and handwriting received detailed attention. A demonstration lesson was also given on the occasion. The Department started three projects in two schools. St. Ann's High School has taken up a project for the improvement of English in Standard VIII, and as a first step, a diagnostic test will be administered shortly. The Goodlet High School, Sholingur, has taken up two projects 'The First Step in the Teaching of English to Beginners,' and 'The Practical Aspects of Social Studies in High Schools.' The Co-ordinator spoke on the 'Dedication of Leaders' ceremony at the Northwick High School. The Honorary Director presided over the Annual Day of the school and complimented the headmaster and staff on the good work that was done. Dr E. M. Woodman of the Ford Foundation, New Delhi, and Shri A. H. Hemrajani, Field Adviser, DEPSE, New Delhi, visited the Centre during this period.

Three five-day workshops for the teachers of social studies, general science and general mathematics were organised by the *Department of Extension Services, Mangalore.* The Department also organised an exhibition of books of the training college and the Extension Services Department and also of those lent by the U.S.I.S. Library and Textbooks Research Centre, Bangalore. Exhibitions of teaching aids in social studies were also arranged by the Department at three high schools in Puttur. The Co-ordinator discussed problems in the teaching of Hindi, social studies and English with members of staff of the schools at Udipi and Puttur. Films including one on "How to Play Cricket" was screened at a number of high schools. The Central Science Club has commenced its studies with regular weekly meetings.

A 7-day orientation workshop on "Modern Evaluation Techniques" for the staff of the training colleges in the Southern Zone was organised at the *Department of Extension Services, Bangalore,* and was attended by 13 participants. The Department also organised a four-day orientation course in "Group Activity Methods" for the teachers of English. Shri S. Dorairaj, Evaluation Officer, conducted the course. It was decided that group activity methods in the teaching of English, bulletin boards, subject study circles and reading projects should be started in different schools, as a result of the discussions between the headmasters of eight high schools and the Co-ordinator. The Department arranged two film shows during the period under report.

The Co-ordinator of the *Department of Extension Services, Kozhikode*, visited 12 secondary schools for conducting preliminary tests in English for Standards VI and IX. He also visited all the schools in Tellicherry area in connection with the library services. Intensive courses in the teaching of English with demonstration lessons also, have been started at two local high schools. The Advisory Committee of the Department decided to give more attention to the teaching of science by arranging demonstrations and experiments, and to organise study circles in various subjects for teachers. Shri A. H. Hemrajani, who visited the Centre, attended the meeting of the Advisory Committee and also visited some of the associated schools.

The Co-ordinator of the *Extension Services Departments, Trichur*, visited a number of schools to discuss the experimental projects that several schools have agreed to take up during the current year He helped to start projects in three schools on the 'Teaching of Mathematics by the Assignment Method,' 'Teaching of Social Studies through Activities,' the 'Maintenance of Cumulative Records,' and the 'Improved Method of Teaching English.' Six more schools are expected to take up other projects in the near future. In the monthly meetings of the study circles in mathematics and science, members planned projects in the two subjects The Department also organised two week-end courses in English and Malayalam. These were attended by 56 teachers. Six schools in the area have started science clubs The Co-ordinator visited several schools during the period under report. Shri A H. Hemrajani paid a visit to the Extension Centre and to three schools to acquaint himself with the teaching of diversified courses in these schools

The Co-ordinator of the *Department of Extension Services, Trivandrum*, visited several schools to discuss the starting of experimental projects, library services, assignment of the work of the science clubs and an enquiry into the teaching of craft. Refresher courses in English, mathematics, general science and social studies were held for ten days for 36 teachers selected from six educational districts of the area. Besides lectures and discussions, demonstration lessons were also organised and the use of audio-visual aids was stressed. Shri A. H. Hemrajani visited the Centre during this period.

The *Department of Extension Services, Mysore*, conducted two 8-days seminars, one on the "Teaching of English in Standard VIII" and the other on the "Teaching of Social Studies," which was attended by 40 teachers. In the first, participants were initiated into the project in Evaluation and discussed specific objectives, behaviour changes and the structural approach in teaching with reference to the new text books.

The *Department of Extension Services, Baroda,* organised (a) a summer school of education, (b) a meeting of science teachers:—

A. Summer School of Education

A 13-day summer school of education was arranged, and 92 teachers attended; and they discussed various topics such as guidance in schools, study habits, cumulative reference records, projects, assignments and diagnostic and remedial teaching. The participants worked out a number of projects in science, mathematics, social studies and Gujerati and also prepared some model assignments. A guidance programme for secondary schools and a programme for improving study habits were also prepared. The participants also worked on a manual for filling in of the cumulative reference cards. 7 lectures were arranged during the summer school. These were: Public Education in U.S.A., Study Habits of Secondary School Pupils, Place of Drama in Secondary Schools, Role of Teachers in Nation Building, Follow-up Work, Study Habits and Organization of School Libraries.

With the help of 7 Research Assistants from the Faculty, an exhaustive list of references from 40 books was prepared on the topics mentioned above. A copy of this list was supplied to each participant who made use of it during the library hour every day. During the 13 days of the summer school, 470 books were issued to about a 1000 teachers. The Honorary Director of the Extension Services Department, Professor S. N. Mukerji, gave the valedictory address.

B. Meeting of Science Teachers

The Department arranged a meeting of science teachers at Dohad. The science teachers decided to undertake the following activities: (a) Collection of soils; (b) Collection of minerals and stones; (c) Collection of reptiles; (d) Collection and preservation of rare leaves from the jungles of Panchamahals. They also decided to undertake a project on 'Fire—a friend and foe of mankind' and on simple machines and their applications.

Guidance

The Department of Extension Services, Vinaya Bhavan, Visva Bharati, Santiniketan, arranged a week-end seminar on the organization of guidance programme in schools. The following aspects were discussed:—

1. Guidance—a co-ordinated activity and co-operative process:—
   - (a) The role of the administrator, the counsellor and the faculty;
   - (b) The role of the parents and the society.
2. The organisational set up:—
   - (a) The Guidance Committee—its constitution and functions;
   - (b) The Home-Room—its organisation and functions;

3. Analytical tools:—

(a) Cumulative School Record, (b) The Interview, (c) Psychological Tests, (d) Anecdotal record, (e) Autobiography, (f) Time Distribution form.

4. General categories of counselling techniques:—

(a) Forcing conformity, (b) Changing the environment, (c) Selecting the appropriate environment. (d) Learning needed skills, (e) Changing attitudes.

5. Student counselling bureau—its place in the guidance programme.

Intensive Work in Schools

The Department of Extension Services, Faculty of Education, Annamalai University has launched a programme of intensive work in eight local schools of Chidambaram and Annamalainagar. The object of the programme is to improve instruction and to promote co-curricular activities. In order to effect improvement in teaching practices, subject committees have been formed in each school which will meet at least once a month. These committees will discuss (1) the role of the teacher; (2) the assignment to be worked out by the pupils; and (3) practical activities to be undertaken in teaching the units of different subjects. Model lessons will be given by the senior teachers in their respective schools for the benefit of their colleagues. Stress will also be laid on the active participation of pupils in class-room work. As regards co-curricular activities, it has been decided that the pupils must be made responsible for library service, keeping the school premises clean and tidy, provision of amenities, organization of sports and clubs etc. Cultural activities like drawing. painting, music and drama will receive greater attention. It is also proposed to organize social service leagues to raise funds for supplying mid-day meals and books to poor students.

Publications

1. Dev Smaj College for Women, Ferozepur.	A report of the seminar on 'Values in Life.'
2. Govindram Seksaria Teachers' College, Udaipur.	(1) Annual number of the 'Gleanings.' (2) A report of the seminar on 'Planning the Session's Work and Evaluation.'
3. Government Post-Graduate Basic Training College, Chandigarh.	(1) Place of English in India today. (2) Introducing Hindi and Punjabi. (3) Punjabi Spellings.

4. B. R. College of Education, Agra.	A report of the seminar on 'Human Relations' conducted by Dr. Anna P. Burrell of the United States Educational Foundation in India in April.
5. Government Training College, Hooghly.	Bulletin No. III (Vol. II of the Library Services) (Cyclostyled).
6. Teachers' Training College, Bhagalpur.	Newsletter from March. 1959 to April, 1960.
7. R.N. Training College, Cuttack.	A report of the refresher course on the teaching of general science.
8. Department of Extension Services, Vinaya Bhavana, Visva Bharati. Shantiniketan.	(1) Bulletin No. IV (Vol. II). (2) A report of the seminar on social studies.
9. Tilak College of Education, Poona.	A report of the workshop on the 'Teaching of Hindi.'
10 Faculty of Education, Annamalai University.	Newsletter—No. VII.
11. Teachers' College, Mysore ...	Reports of Seminars and Workshops (in press).

Counselling Pupils

Few teachers seem aware of individual problems which arise in the context of day-to-day activities in the class room. But it is necessary for them to focus their attention on problems of individual pupils. i.e., to shift the emphasis from the class to the pupil. The author, Dr. S M. Mohsin, is the Director of the State Bureau of Education and Vocational Guidance, Bihar. He describes in this article the categories of individual problems, the nature and scope of the counsellor's work, and the limitations of the present guidance programme and offers suggestions on how guidance work can be improved.

—Editor

Guidance to pupils is being increasingly recognised as an integral part of the school programme. The main reason is the growing shift of emphasis from the class to the pupil Each pupil is a unique individual who has his peculiar problems of growth and adjustment. Tailoring the school programme to the requirements of the class as a whole would make the average teacher oblivious to the problems of individual pupils, and would not help him in his effort to meet the challenge of these problems. Unfortunately, the pace of the transition is much too slow in this country. The writer requested an assembly of highly experienced secondary school teachers to prepare an inventory of such problems of pupils, that are of an individual character. The teachers could put their finger only on the diverse aspects of the general socio-economic difficulties that refer to such hardships as inadequate nourishment, lack of proper clothing, incapacity to meet the cost of education, parents' neglect of the requirements of home study, teachers' indifference to the needs of under-privileged pupils, and so on. Only such problems were mentioned that have more of class reference than individual reference Surprisingly enough, few teachers stated even such problems as backwardness in a school subject, lack of concentration, poor understanding, weak memory, etc. These are the problems that arise in the context of the day-to-day classroom activities and progress of individual pupils. Even these did not receive such pointed attention by the teachers as to induce them to make their mention in the requested inventory.

Though the focus on the pupil is slow to come about, nevertheless our educationists have not only highlighted its importance, but also reorganised our entire school system so that the pace of the transition may be accelerated. They have set up a scheme of school education that would stimulate the average teacher to appreciate and act up to the ideal of his being the custodian of the all-round

growth and development of the *whole* child whom society has placed under his charge. This is why guidance has been recognised by the Mudaliar Commission as a normal part of the school activity.

The concept of guidance is too well-known to require a definition. Guidance is the help offered by one individual to another individual who is facing a problem of adjustment that is beyond his unaided capacity to solve. A problem is the experience of a difficulty, a limitation, an inadequacy, an unsatisfied need, a defeated purpose, on the part of some individual. Guidance is the process of reinforcement, of adding strength, stimulated by another individual. According to the philosophy of guidance, the reinforcement is predominantly psychological rather than physical. The aim is to induce such conditions within the individual that would enable him to explore and mobilise his own resources and make the best use of them in fulfilling his need and satisfying his goals and purposes. The ultimate object of guidance, specially to adolescents, should be the development of the capacity for self-direction and self-guidance. These are the marks of maturity as well. A really mature adult must have the capacity to assume full responsibility for his life and conduct. Guidance may then be described as an expert assistance rendered to a pupil in attaining full growth and maturity. The reader will agree that viewed as such, guidance and education have a common aim. The educative process and the guidance process go hand-in-hand.

PROBLEMS

The problems that confront individual pupils have been grouped under three broad heads educational, vocational, and personal. The educational problems are such as educational indecision which school to join or what offerings to select, under-achievement, differential achievement, lack of academic interest, excessive indulgence in unacademic pursuits, poor concentration, weak memory, defective writing or speech, etc. The vocational problems, which are not as diverse for school pupils, may be such as part-time employment, entering a job by terminating studies, post-school employment, with the related problems of the know-how about jobs and of suitable choice. The personal problems are predominantly social and emotional. Economic problems of individual pupils also belong to the category of personal problems, such as inability to pay the school fees, want of text books and want of proper lodging and boarding. But these problems are an aspect of the broader socio-economic problem that can be solved only with the growth of national prosperity and materialisation of the concept of the welfare state. The social problems are those such as undesirable attitudes and behaviour toward family members, other pupils, teachers, members of the community, habits of dishonesty, egotism, selfishness, unkindliness, etc. Other behaviour problems of pupils that are characterised as acts of indiscipline come under the category of social problems. Emotional problems are feelings of inferiority, self-consciousness, worries and

anxieties, morbid fears and doubts, emotional instability, emotional immaturity, sexual aberrations, etc. Besides these, problems of mental and physical health may also be placed under personal problems.

COLLECTION OF GROUP DATA

The problems listed above are peculiar to individual pupils and any help in their final solution can be extended on a purely individual basis. However, the guidance worker may collect some relevant pupil data on a group basis also and thus economise his time for spending on more pupils. He may administer a few psychological tests to the entire class of pupils and, subsequently, use the test information in reformulating some individual pupil's problem and understanding his background and resources. Tests recommended for such use are those of general ability, reading competency, interest, social and emotional adjustment, in addition to a well-planned background regarding the questionnaire and personal data. These tests and questionnaire can be administered to a group of 30 to 40 pupils at a time. The test data will remain in the guidance worker's file and he will use them when the need arises. Undoubtedly, the test information will not be exhaustive and the guidance worker will have to supplement the data by using other sources like the school record, the teacher's judgement based upon their observation of pupils, etc. If a cumulative record is maintained in the school, much of the relevant information can be drawn from it.

The pupil-data, gathered and organised by the guidance worker, would not serve the entire purpose. The data have to be placed before the pupil; they are to be understood and accepted by him; they are to be utilized by him in planning a course of action. These can be effected on an individual basis only. The pupil has to be interviewed and, thus, made to enter into the counselling relationship with the guidance worker. Though in the literature, guidance and counselling are often used interchangeably, counselling may, strictly speaking, be treated as a phase of guidance Counselling is that stage in the total guidance process which can be produced in a purely individualistic and personalistic situation, the face-to-face situation of the interview between the counsellor and the counsellee. The object of the counselling interview, in addition to the development of self-understanding, is to free the counsellee from the forces that are impeding his growth to full maturity. Once the restricting forces are weakened, the individual gains power to restrengthen his personal resources and assume complete responsibility for solving his adjustment problems. An efficient guidance service should remove any future need for guidance It should contribute to the ripening of the capacity for self-guidance or self-direction in developing and utilizing one's resources in a manner that maximum personal and social efficiency is secured.

DEFECTS OF PRESENT SCHOOL PROGRAMME

If we closely examine the guidance programme of our average schools we will note that, generally, the programme covers only the

preliminaries of the guidance service. Pupil data are gathered using test and non-test methods and on their basis recommendations are made that are reported to the head of the institution for *his* guidance, but less often to the guardian, and seldom to the pupil. The end-stage of the guidance programme, namely, counselling is never gone through. The effectiveness and utility of such guidance service remains an open question. The problems of individual pupils receive little attention and the entire programme boils down to a mechanical routine procedure. The real purpose of guidance is defeated.

PREPARATION OF COMMON PROBLEM CHECK LIST

Counselling to pupils should be planned on the basis of a preliminary investigation into the frequent problems of individual pupils. For this purpose the leader of the programme, who may be the headmaster or principal of the school, a teacher trained in guidance, or a counsellor, if the school has already procured the services of a counsellor, should call a conference of the teachers to discuss the philosophy of guidance and the place of guidance in education. In another conference, the teachers should be led to decide what problems of pupils are typically individual and about which the school can do something without waiting for an overnight change in the socio-economic set-up of the country. They should then be requested to prepare independently a list of such problems on the basis of their experience of the life and behaviour of individual pupils. The guidance trained teacher or counsellor, should thereafter meet pupils of the higher classes of the secondary school, in groups of 40 to 50. He should have an illustrative discussion, with the pupils, of the common problems of individual pupils. Each pupil in the group should then be asked to state and describe on a slip of paper the difficulties he has been facing, without mentioning his name. As the identity of the pupil is not disclosed, he is expected to state his problems more freely and unhesitatingly. In another conference of teachers, the list drawn up by the teachers and those by the pupils should be read out and discussed. The problems frequently mentioned are then selected and listed together. The list is to be used for checking by individual pupils in a group; it will constitute the common 'problem check list'.

IMPORTANCE OF REVIEWS AND REPORTS

The pupil data service may then be planned, as best as possible, on a group basis, and administered to the pupil. After the data have been analysed and integrated, recommendations for the use of the principal or the guardian may be made, as usual. In addition, special cases should be isolated, more particularly on the basis of the problem check list, for counselling. It goes without saying that counselling is an art which like all other arts presupposes *enlightened* practice in order that it may be set apart from quackery. A suitably trained guidance worker, backed by increased acquaintance with the related literature, and inspired by an urge for professional growth,

can pick up in a short while the necessary tricks of the trade. Reviews and reports of counselling to school pupils abundantly found in the literature are as important appendages to the mental equipment of the school counsellor as 'case reports' and 'law reports' to that of the medical and the legal practitioner respectively. Unfortunately, so far counselling cases reported from Indian sources are scarcely to be found. However, the reports of foreign cases are not less illuminating. Human nature is the same everywhere and so the difficulties and problems of human adjustment are only a shade different from place to place and culture to culture.

The History of the Guidance Movement in India

Perin H. Mehta and Hoshang P. Mehta

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Introduction

Writing about vocational guidance in the U.S.A., Albert Thompson stated in 1954[1], "Vocational guidance as a movement in the U.S.A. is still relatively young. Although young people have gone to their elders for help and advice in vocational problems throughout history, the giving of such service is a 20th century development, going to the time of Frank Parsons who in 1908 established the Vocational Bureau in the Civic Service House in Boston." If the movement in the U.S A. after a development of nearly 45 years is regarded as young, the movement in India can only be considered to be in its infancy. This article attempts to review the development and the present status of guidance in the country, with emphasis on guidance in secondary education.

A study of the history of the guidance movement in other countries shows that generally a beginning has been made with vocational problems and later the movement has been extended to other areas of adjustment such as personal, social and material adjustment. This is presumably because the need for guidance in the vocational area is more readily felt than the need for guidance in

[1]Albert S. Thompson, "A Rationale for Vocational Guidance" *The Personnel and Guidance Journal, May,* 1954, *P.* 533.

other areas. In this country, too, guidance appeared on the scene as vocational guidance and has already shown signs of spreading to other areas.

The Universities Take the Lead

It is very difficult to trace the exact genesis of any movement, but in India guidance seems to have originated in the interest of University professors of psychology and education in applying their knowledge to practical fields. One of the earliest manifestations of this interest was the establishment in 1938 of the Section of Applied Psychology in the Department of Psychology at Calcutta University. The Section was set up with the objectives of carrying out research in mental tests and providing vocational guidance, and hence its approach to guidance was mainly test-centred. The example of Calcutta University was followed by Patna University whose Department of Psychological Services and Research, established in 1945, undertook to provide guidance to University students and others. The scope of guidance services at this Institute was not confined to vocational problems but also covered educational, personal and social problems, and its approach was more clinical than psychometric.

The Role of Private Agencies

The movement was carried further by the interest of private individuals and social welfare agencies in helping people with their problems of adjustment. In the early forties, Batliboi, a retired chartered accountant, started with the help of a psychologist, a vocational guidance centre in Bombay which functioned for about six years. The Office of the Trustees of the Parsi Panchayat Funds and Properties, a social welfare agency of the Parsis in Bombay, established its Vocational Guidance Bureau in 1947 with a view to helping members of the community during the post-war reconstruction period. The Bureau soon extended its aim and scope, and threw open its services to members of all communities. Its individual counselling and group guidance programme helped to create in those early years a consciousness of the need and value of guidance This Bureau also pioneered in the training of guidance personnel by conducting the first training course for Career Masters in this country, in collaboration with the Indian Institute of Education and the Headmasters' Association, Bombay. Among the private agencies which contributed to the development of guidance in the early years, mention should also be made of the Guidance Services of the United Christian Mission, Jullundur, as well as of the Rotary Club of Bombay and Y.M.C.A. of Calcutta, both of which brought out a series of career pamphlets.

The Defense Services' Programme for the selection of officers and other ranks, during World War II and the post-war years, which included the application of psychological and situational tests, influenced the emerging guidance movement by giving it a further

psychometric bias. The selection procedures caught the imagination of the public as well as of professional workers in psychology and guidance, and stimulated the use of psychometric techniques.

Governments Enter the Field

The first Government agency to enter the field of guidance was the Bureau of Psychology, Allahabad, established in 1947 by the Government of Uttar Pradesh, with the aim of providing an adequate and efficient psychological service for the school going population of the State in particular and other sections of the public in general. Educational and vocational guidance was one of the foci of its activity, the approach being in the main, psychometric The Bureau later expanded its activities with the establishment of five District Psychological Centres at Meerut, Bareilly, Varanasi, Lucknow and Kanpur, and also undertook the training of School Psychologists. The then Government of Bombay was the next to enter the field with the setting up of its Vocational Guidance Bureau in 1950. To this Bureau goes the credit for the collection and dissemination of occupational information on a large scale, a function which was furthered by the setting up of its sub-bureaus in Poona and Ahmedabad, as well as credit for the training of Guidance personnel at two levels, viz., Career Masters and Counsellors

Guidance got official acceptance from the Government of India when the Mudaliar Commission on Secondary Education strongly recommended the introduction of guidance programmes in schools and devoted a whole chapter to the subject in its report. One of the first fruits of this recognition was the establishment by the Ministry of Education of the Central Bureau of Educational and Vocational Guidance in 1954. However, even before this, the Ministry of Education had sponsored two seminars in educational and vocational guidance which were organised at Delhi by the Central Institute of Education. The first of these seminars, organised in March 1953 at the initiative of Dr. W. L. Barnette, Jr., a Fulbright Professor attached to the Central Institute of Education, was the first occasion when guidance personnel from different parts of the country assembled to discuss their problems. These seminars led to the formation in 1956 of the All-India Educational and Vocational Guidance Association.

With the establishment of the Central Bureau of Educational and Vocational Guidance and the offer of the Ministry of Education to help the State Governments to set up their own bureaus or to expand their existing bureaus, the way was paved for a country-wide guidance service in secondary schools. Orissa set up its State Bureaus of Educational and Vocational Guidance in 1955. In 1956, the Bureau of Educational and Psychological Research of the David Hare Training College got recognition as the State Bureau of Guidance of West Bengal. Rajasthan and Madhya Pradesh set up their Bureaus in the same year; Assam and Andhra Pradesh in 1957; Rajasthan in 1958, and Mysore and Kerala in 1959.

Parallel to the development of guidance in secondary education is the development of guidance in the National Employment Service, beginning in 1956. Following the recommendation of the Shiva Rao Committee on Employment and Training, the Ministry of Labour and Employment established a Vocational Guidance Unit at the headquarters of the Employment Service in the Directorate General of Resettlement and Employment. By now Vocational Guidance Sections have been established in 46 employment exchanges. These provide vocational guidance and employment counselling service to all persons who seek employment or guidance from the employment exchanges, and also assist young persons in obtaining suitable placement in jobs, training institutions or apprenticeships.

Efforts have been made from the beginning to coordinate the guidance programmes of the education authorities with those of the National Employment Service. At the initiative of Strom, a UNESCO expert attached to the Central Bureau of Educational and Vocational Guidance, and Doos, an I.L.O. expert attached to the D.G.R. & E., the Ministries of Education and of Labour and Employment have worked out an agreement concerning the division of responsibility for the provision of guidance services. To facilitate collaboration at the Centre, a Working Group on Vocational Guidance and Employment Counselling has been formed. To bring about collaboration at the State level, State Coordination Committees have been formed in ten States, and District Coordination Committees have also been proposed.

The development of the guidance movement in India shows a marked feature, viz., that in the beginning the movement was stimulated by the efforts of universities and private bodies, except perhaps in the case of Uttar Pradesh where the State Government took the initiative, and that the Government entered into the picture later and was encouraged in its policy and programmes to some extent by the initial efforts of private agencies. At present, however, the lead is taken by Government agencies.

THE ORGANISATION OF GUIDANCE

The State Bureau

The Central Bureau of Educational and Vocational Guidance, together with the State agencies of Guidance which are known by different names in different States but mostly by the name of State Bureau of Educational and Vocational Guidance, constitute the base-line of the organisation of guidance in secondary education. Some of the State Bureaus of Guidance have sub-offices. Expansion of the State Bureaus is also likely to take place in the Third Five Year Plan by the attachment to them of peripatetic field-counsellors whose function will be to assist and supervise the school guidance personnel in the discharge of their various duties. The functions of the

State agencies are generally (1) to train guidance personnel for the schools. (2) to assist in the setting up and supervision of guidance programmes in schools. (3) to prepare tests and other tools of guidance. (4) to prepare occupational information materials, and (5) to conduct research. Each State Bureau performs these functions in respect of its own State.

The Central Bureau

The Central Bureau of Educational and Vocational Guidance is a part of the Secondary Education Division of the Govt. of India. Ministry of Education. Its functions are to give professional assistance to the State Governments, Universities and private agencies in the setting up and running of their guidance organisations, to train key personnel, to co-ordinate the activities of State and private guidance agencies, to prepare tests and other guidance tools and aids, to conduct research in various problems connected with guidance, and to undertake such other activities as will promote the development of guidance services in the country and improve their quality. Some of the co-ordinating activities undertaken by the Central Bureau are to hold periodic conferences of the heads of State Bureaus of Guidance, to collect guidance statistics on a nationwide basis, to serve as a clearing house for information on tests and research in the country pertaining to guidance, etc.

Guidance in Secondary Schools

The efforts of the Central and State Bureaus of Guidance are geared to providing guidance services for pupils of secondary schools. Guidance services in schools are manned by guidance personnel trained either by the State Bureau, the Central Bureau, a University department, or the extension service department of a training college. Three types of guidance personnel are recognised, viz., the counsellor, the teacher-counsellor and the career master. The counsellor is a full-time worker in guidance. The teacher counsellor is a part-time worker, combining guidance with teaching duties. The career master, generally speaking, is a full-time teacher but undertakes some guidance activities as extra duty and is at most given one or two periods a week in his schedule to devote to guidance.

The professional training in guidance received by these personnel varies considerably. The training of counsellors and teacher-counsellors ranges from practically no professional training in guidance to nine months' full-time training. In some places the teacher-counsellors' training is of a shorter duration than that of counsellors. Career masters generally receive a fortnight's or a month's training and generally confine their activities to the collection and dissemination of occupational information. The staff of the Government and private bureaus also carry on guidance activities in some schools.

University departments of education and of psychology, and extension service departments of training colleges, have also contributed to the training of guidance personnel. Several universities offer

an optional or compulsory course in guidance in their programmes for the Bachelor's or Master's degree in education or psychology. The M. S. University of Baroda offers a post-graduate diploma course in Guidance. The equivalence between these university courses, and the training courses run by the Central and State Bureaus of Guidance, some of which are also post-graduate diploma courses, has not been established. The University courses generally suffer from inadequate provision of practical and laboratory work.

Guidance services have as yet been set up in very few schools. Evaluation of these services has not been made, but the writers' impression is that they are generally quite inadequate. In some cases this is because untrained persons are in charge of these services. But even when the guidance personnel are trained, their services are not fully utilized because of failure on the part of educational administrators to make provision for guidance activities in their budget and in the time-table of the pupils and of the guidance personnel.

As collection of guidance statistics on a country-wide basis has only recently been undertaken by the Central Bureau, it is very difficult to give a reliable estimate of the number of schools having a guidance programme. Another source of difficulty is that the programmes are conducted at different levels. For example, some schools maintain only a career information corner, and occasionally arrange for employment officers or other speakers to give talks on careers: whereas the programme in other schools includes the maintenance of cumulative record cards and a regular series of class talks on careers. The programme in some multipurpose and higher secondary schools also includes guidance or selection (mostly selection) for the various curricula based on results of psychological tests. Hardly any individual counselling is done in the schools, and the guidance is mainly of a prescriptive nature. The following brief statements in respect of different States may give some idea about guidance programmes in the schools to-day.

Assam

No guidance programme has been started in any of the secondary schools of the State. Talks on guidance, arranged jointly with Vocational Guidance Officers of Employment Exchanges, have been given to students of some high schools.

Andhra Pradesh

A programme including counselling and testing was to be introduced in the multipurpose schools from the academic year 1960-61. A series of class talks on curricular and occupational orientation were arranged by the State Bureau in selected schools of Hyderabad and Secunderabad.

Bihar

Some kind of programme has been introduced in both the Government and non-Government schools. A teacher-counsellor has been appointed in 118 non-Government multipurpose and higher secondary

schools and a school counsellor has been appointed in 35 Government Multipurpose Schools.

Kerala

Talks by Vocational Guidance Officers of Employment Exchanges are arranged in schools.

Madhya Pradesh

Guidance services are provided in 12 multipurpose schools which have appointed a school counsellor. The State Bureau, in collaboration with the State Employment Exchange at Jabalpur, conducts a group guidance programme in a few local schools.

Maharashtra

Maharashtra has all the three types of guidance personnel working in secondary schools. There are 608 career masters, who disseminate occupational information to the students and generally take one period per week in class X for this work. There are also 14 teacher-counsellors who get an extra allowance of Rs. 20 per month. and 10 school-counsellors.

Career conferences and exhibitions for groups of schools are arranged every year all over the State.

Mysore

The State Bureau provides occupational information services to some schools.

Orissa

Guidance services have been introduced in all the 18 high schools of Cuttack and Puri, with the emphasis on dissemination of educational and occupational information.

Rajasthan

Students of class VIII of 14 schools at Jaipur, Jodhpur, Bikaner, Udaipur, and Kotah have received guidance through group methods.

Uttar Pradesh

School Psychologists have been appointed in 20 Government Higher Secondary Schools. Guidance to students of Class VIII, X and XII in some of the other schools is provided by the group guidance programmes conducted by the State Bureau and its five District Centres.

West Bengal

162 teacher-counsellors are working in 104 multipurpose schools of the State.

Delhi

A Guidance programme is conducted in 5 Government Schools (1 multipurpose and 4 higher secondary) by counsellors and in 4 other schools by teacher-counsellors.

Guidance in the National Employment Services

The vocational guidance and employment counselling programme is an integral part of employment service and is operated through specially trained employment officers who are known as vocational guidance officers. They received an initial training of three months at the Directorate General of Employment and Training, New Delhi. Some of them have a Master's degree in education, psychology or social work. Some States also have a State Vocational Guidance Officer at the headquarters of the State Employment Service. This Officer will be appointed in all States during the Third Five Year Plan. The function of this officer is to co-ordinate the guidance programme in the different exchanges in the State, and also to co-ordinate it with the programme in the schools in the State. The machinery set up to bring about co-ordination at different levels between the programme of the employment and education authorities has been described earlier in this paper.

Special Vocational Guidance Sections have by now been set up in 46 employment exchanges. The programme consists of both group and individual guidance. The group programme includes an invitational talk by the guidance officer explaining the guidance facilities available at the exchange, and opportunity is also taken to re-orientate the job attitudes of the applicants. This is followed by a group discussion in which the guidance officer presents a detailed account of the training and job opportunities available to the applicants. Special programmes are also arranged in which the recruiting or personnel officers or managers of large commercial or industrial establishments, explain the training, apprenticeship and job opportunities in their respective concerns. An occupational information room is also maintained. The individual programme consists of individual counselling and providing occupational information on an individual basis. In consultation with the State Bureaus or other education authorities, guidance officers and employment officers of employment exchanges give talks in schools and participate in career conferences.

Some Problems

The preceding account of the development and present position of guidance in secondary schools in India reveals one marked feature, viz., its uneven development. In some parts of country, guidance has made a fair headway with a number of teachers trained and programmes introduced in several schools; in other parts of the country a beginning has just been made, while in still other parts, the introduction of the programme is resisted. Another important feature is that although organisations for guidance have been set up at the Centre and in the States, the tempo of introduction of guidance services in the schools has been very slow. Several factors underlie this situation, some of which are listed below:—

1. The introduction and development of guidance in secondary schools can only be considered along with other priorities

in education. There are at present several other priorities which claim greater attention.

2. There is a general lack of awareness among the administrators about the nature and objective of guidance in schools. Guidance is not sufficiently recognised as an integral part of education.

3. Guidance is mostly understood as being confined to vocational problems, and as there is a considerable shortage of employment and training opportunities, guidance is opposed on the ground that there is not much scope for it in the country.

4. Educational administrators are reluctant to make provision for guidance in the time-table, owing to pressure from different directions. Not realising adequately the importance of guidance, they are unable to consider seriously its claim for being included in the class time-table.

5. Guidance involves collaboration of the entire school faculty with the guidance specialist. This is not readily forth-coming partly because the teachers are overworked, partly because they do not understand the nature of guidance and the need for it, and also because the specialists make no efforts to elicit the co-operation of the teachers.

6. Guidance also requires the co-operation of parents, which is difficult to obtain owing to their many preoccupations and their lack of awareness of what guidance has to offer.

The Task Ahead

It is believed in some quarters that the guidance movement cannot make much progress unless psychological tests are first developed and research carried out. The writers do not agree with this view. Guidance is more than just a matter of using certain tools and techniques; it is a point of view. While it is certainly necessary to push research and test construction programmes, the preceding analysis of the factors which retard the progress of guidance makes it clear that the most important task which lies ahead is that of creating among the public in general, and educators in particular, an awareness of the need for guidance, and promulgating correct concepts about guidance. When this is achieved, and when guidance comes to be accepted as an integral part of education, the present apathy towards guidance will give place to enthusiasm, and educational administrators will be willing to make provision for guidance services in terms of finances and time, and to lend active support to the guidance personnel.

Along with the need for orientation is the need for training programmes, in order to provide competent personnel to staff guidance services, thereby ensuring that minimum professional standards will be maintained.

Integrating Guidance with General School Work

Margaret Norton and John K. Norton

Mrs. Margaret Norton is a specialist in guidance. She holds her Ph. D. from the University of California and has taught science and mathematics for several years. She is now in charge of guidance work in a large American High School (Berkeley, California), Dr. John K. Norton is the Chief of Party, Teachers College, Columbia University Contract Team in India, and is a specialist in Educational Administration.

In this article, the authors discuss guidance as a means of achieving modern educational objectives, which in the main, are to develop the varied capacities of pupils and equip them with the necessary knowledge, skills and ideals by which they can enjoy a richer personal life and contribute to the well-being of society. —Editor

Why the Problem Arises

The problem of integrating guidance with general school work arises when guidance is introduced in a traditional school, which has a fixed programme. Because of differences in philosophy, there is likely to be misunderstanding and lack of coordinated effort in developing a guidance programme.

Need for A Mutual Working Philosophy

One of the first steps in integrating guidance and general school work is for headmasters and teachers to understand the educational philosophy on which guidance is based. Also, the director of guidance must understand the philosophy and problems of the school in which he works. Since the headmaster, class-room teachers and the guidance worker all have the same ultimate objective, namely, the best possible training of youth, they should squarely face their differences and strive to reach an acceptable working agreement. This is, of course, far easier said than done.

In some cases, the guidance counsellor may have to do the best that he can until the results of his work convince the headmaster and teachers of the soundness of the philosophy on which guidance is based.

A much happier situation is when a school staff accepts a philosophy of education which recognizes the changing needs of society, the wide range of pupil abilities, and the desirability of relating the educational programme to them. Then the importance of a guidance programme is so clear that it becomes an integral part of the school programme and the problem of integration is solved.

A Major Purpose of Guidance

A major purpose of guidance is to help each student gain the greatest possible benefit from the schools which he attends. It should help him to develop his special abilities and talents, to plan his further school programme, to form good health habits, and to appreciate moral and spiritual values. When he leaves school, he should have the necessary knowledge, skills and attitudes to earn a living, be a worthy member of a family group, and to participate intelligently in civic affairs.

When guidance is seen in these broad terms, it is not something separate from general school work. It is a dynamic means of achieving modern educational objectives.

School Administration and School Guidance

A headmaster imbued with the guidance viewpoint seeks to develop the varied capacities of pupils by providing differentiated curricula, to initiate sound policies as regards pupil promotions, and to install a system of cumulative case records which show the progress of each pupil in terms of his ability.

When such policies and practices are followed, the administration of the school contributes to the guidance of pupils. The headmaster looks upon each entering student, not merely as another candidate to be drilled to pass external examinations, but as a bundle of potentialities to be discovered, awakened and developed. He strives to know each student by name, and shows that he is interested in helping him to make the most of himself. A youth resents a dictator. He respects and appreciates a friendly headmaster who holds him up to the highest standards of which he is capable.

The Classroom Teacher and Student Guidance

A major problem facing every teacher is the wide variation among pupils in learning capacities, in interests, in family background, and in ambition. Some teachers with large classes disregard all these differences, and are satisfied merely to drill their classes in questions and answers set by the syllabi.

On the other hand. well trained teachers imbued with the guidance viewpoint seek to help each pupil gain the greatest possible benefit from school They understand the psychology of individual differences, of child growth and development, and how pupil--interest and initiative may be aroused to speed learning. Methods of instruction suited to different groups of pupils are developed. Causes of pupil failure are identified. Such teachers rejoice with pupils when they succeed. They teach boys and girls. School subjects become a means to that end.

This viewpoint also requires teachers with understanding of the world outside of school textbooks, so that they can show the relation of the subjects they teach to community and national life and to individual and social development. This is one of the many forms of guidance that the well-trained teacher can give.

Teachers with out-going personalities, pleasing manners, high ideals, and a love for teaching, by being themselves, unconsciously guide pupils in ways of courtesy, good study habits, thoughtfulness of others, and social responsibility. Such teachers win their students' confidence and friendship and are able to give them direct and personal guidance.

Role of The Guidance Expert

The guidance expert, trained in general and child psychology, in child growth and development, in keeping cumulative case records, in such guidance techniques as personal interviews and the giving of standardized tests and their interpretation, plays an important role in a school faculty. This is particularly true if he knows the admission requirements and courses offered in various types of educational institutions, and also knows the training required and opportunities offered in different professions and occupations. Another function of the guidance counsellor is to coordinate the guidance activities of the headmaster and teachers and to develop a well-rounded guidance programme.

A well-planned guidance programme suited to the needs of a particular school, in time wins not only the students' appreciation and cooperation, but also that of the headmaster, teacher and parents. Headmasters find that when students have been counselled and enrolled in courses best suited to their abilities and interests, and when their progress is frequently checked and necessary adjustments made, there are fewer failures, fewer drop-outs, and fewer cases of student indiscipline.

Teachers in a school with an adequate counselling programme find their teaching less frustrating and more interesting and rewarding because of their students' greater accomplishments.

Parents are less critical of such a school and give it their moral and financial support. They appreciate the special attention given to the individual needs of their children. Parents of high school

students are often at a loss to know how to help them to find their places in a changing adult world. Such parents welcome the advice of a well-trained school counsellor.

Counselling individual students requires more than good intentions and a fatherly interest in their problems and ambitions. It requires time, patience, special training and experience. The professional training of well-qualified guidance counsellors is a major responsibility of teacher training institutions.

The role of the guidance expert is important, but even when there is no trained person available to fill this role, the beginnings of a guidance programme can be initiated.

When a headmaster and the teachers recognize the facts of individual differences and the ever increasing range of occupational choices, they come to realize the need for increasing the number of curricular streams and for educational and vocational guidance.

A guidance programme can be initiated by freeing a teacher, with special aptitude in handling pupil personnel problems, from classroom duties for certain periods each day. As this teacher-counsellor proves his worth, he should be encouraged to secure training in the field of guidance, and have more time allotted for this work.

Many high schools in the United States find that the "home-room" organization is one means of student guidance. According to this plan, about 30 students of the same grade meet in their "home-rooms" with the same teacher for a short period each day during their three-year high-school course. The "home-room" teacher becomes well-acquainted with each student in his room, checks his attendance and the progress he is making in his subjects and counsels him on his special problems. The success of the home-room depends on whether the teacher is interested in and has some training for guidance work.

State Departments of Guidance have important functions to perform. Through in-service workshops and seminars, they should develop a guidance viewpoint among headmasters and selected classroom teachers. They should offer more extended training in the philosophy and techniques of guidance to part-time, as well as to full-time, guidance counsellors. From time to time they should call conferences of headmasters and counsellors to review progress in the development of guidance programmes and to point the way to further progress. They should encourage teacher-training institutions to provide well rounded courses for the pre-service training of guidance experts. Research studies organized by State Departments of Education should regularly assemble facts concerning the development of guidance and should seek to evaluate its effectiveness.

Local high schools should be helped in starting teachers' libraries of carefully selected books on educational and vocational guidance.

Catalogues and bulletins of information from polytechnic schools. colleges and universities setting forth their matriculation requirements, courses offered, degree requirements, and the like should be collected.

As the industrialization of India proceeds, multipurpose secondary schools should make contacts with local employers and encourage the surveying of local job opportunities. These findings will be helpful to students in making choices among the vocational "streams" offered in multipurpose schools.

The Union Ministry of Education has wisely established a Central Bureau of Educational and Vocational Guidance with a trained staff to work with State leaders in the guidance field as well as with pilot schools which are initiating guidance programmes.

This Bureau through all-India conferences, such as the one recently held for State Guidance Directors, through the development of researches in cooperation with the States, and through pioneering work in test construction, is destined to exercise highly significant leadership in the field of guidance.

There are few factors which will do more to increase the effectiveness of education in India than a guidance programme integrated with the general work of every school.

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A Correction

In the May-June issue of this journal by mistake, the title of the book that was reviewed on page 33, under the heading, Introducing Books on Evaluation was omitted. It is

> "Measurement in *Today's Schools*" by C. C. Ross. Revised by Julian C. Slantey, New York, Prentice Hall. Inc. 1955

Rural Expectations concerning Education in India

N. V. Tirtha

Dr. Tirtha is a Lecturer in Education at the College of Education, Osmania University, Hyderabad. He went to America as a Fulbright Scholar and passed his Ph.D. degree in Education from Stanford University, California, U.S.A. His interest in research and experimentation in education led him and his wife, who is also a Fulbright Scholar, holding a Master's Degree in Education to undertake a short sample survey of a small village, Pinjerla, near Hyderabad. The methods and the results of the investigation are given in the article below. —Editor

In the case of so large and needy a nation as India, educational progress cannot be thought of in linear terms. They may be adequate to express abstractions like the percentage increase in literacy, the number of new schools or the fiscal allocations for education and so on. Indian education needs to be appraised at each step against the background of the vast cultural changes that are sought to be brought about by 'democratic planning, amidst conflicting valuational pulls that operate in the subcontinent. The fact that these cultural changes are sought to be effected on a fairly rigid social structure, which is both ancient and well-established makes the problem even more complicated.

Results of Case Studies

Analysing the above complex, one study[1] points out "The Government shares the major responsibility for the failure of many of its rural programmes. Although the Government programs are rational and competently drawn, they are not based on rural reality." There is indeed a great need to minimise the discrepancy between the value patterns of governmental workers and the rural people. Case studies

[1]Merle Aldo Akeson, "Intentions of Village and Government Sub-cultures in the Promotion of Rural Education in India" (Unpublished Ed.D. Disertation, School of Education, Stanford University, California, USA, 1957), p. 3.

done in this connection are illustrative of the inner dynamics of these apparently paradox attitudes, values and motivations that appear to be inherent in the context of India's developmental programmes.

There is yet another aspect of cultural dynamics which operates in the context of Rural Indian Education. The members of a society reinterpret proffered innovations in terms of the dominant themes and existing needs of their society, Dube cites an interesting case study[1] in this regard.

> "Education has come to acquire a special value (in rural India) with the upper castes because, among other things, it is one of the factors that can enable them to maintain traditionally high social position. The lower castes value it because their achievements in this field promise the possibility of breaking down some of the harsh ascriptive aspects of the traditional social organization."

Need for Critical Evaluation

Though studies like the ones quoted above are not many, the available ones suggest that a balanced and critical evaluation of the motivations and mechanisms of change in rural societies, together with the analysis of the cultural determination of acceptance and rejection, can provide fruitful guidelines toward better planning and execution of rural education programmes. Besides, no sociology of education in India will be complete until the exact nature of the people's educational expectations with all their seeming contradictions are fully understood.

Therefore, the following study is undertaken with a view to analyse the more specific expectancies concerning education in a rural community.

Locale of the Investigation

The investigation was undertaken in Pinjerla, a rural community 29 miles from Hyderabad (Andhra Pradesh), on Hyderabad-Bangalore Road. The village is itself not on the main road A bullock cart road of about three miles connects the village to the main cement road. It is chiefly an agricultural community of 1034 people living in 184 families out of which 167 are families of landless agricultural labourers. The 54 Reddy families are interrelated and they own nearly 80 percent of the lands in the village.

Educational Facilities

Till about 15 years ago, there was no school except a private 'Madarasah' where a teacher was teaching reading and writing Telugu for children between the ages of 4 and 7, in exchange for 5

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[1]Indian Village—A symposium, Journal of Asian Studies, XVI No. I (Nov. 1956), p. 30.

seers of paddy from each house. There were only four educated persons in the village in the year 1948. One of them was the Patwari of the village who had studied up to the 8th Standard of the High School. The other had completed his matriculation in Hyderabad and was studying for the Overseer Examination of the Osmania University, while the remaining two had studied up to the 7th class in Shadnagar, the Taluq Headquarters for the village. The private 'madarasah' in the village had 18 students.

This investigation was undertaken in the year 1960. The village has a pucca four-roomed building. Its educated persons are, a Government Teacher who is a matriculate, fifteen boys of the village who are studying in High Schools in the neighbouring towns, one person who graduated from the Osmania University, an overseer, and three matriculates who are employed as teachers in Hyderabad and in other villages.

Interest in Education

A night school which was started for the period of the summer vacation, 1960, had a tremendous response; 30 adults from the Harijan Basti and 25 adults and children from the rest of the village participated. The third day of the night school, a Dhangar woman with her nine-year-old son, came to the teacher of the night school, touched her feet with great respect and said "My child has to go for grazing in the morning and he can learn only in the night. So, take him to your school though he is not an adult. Teach him to read and read 'Gita laga chadvu pettu talli' (teach him like a song)". Then she narrated her miseries and how the Patels are exploiting her family. "The only way that we can be saved from all these is by educating this son. And you have come like a goddess to the village to educate my child . . . .".

The above dialogue is presented to indicate the great urge on the part of the members of the community to get themselves educated. An investigation was therefore undertaken to enquire about the expectations concerning education from the members of the community.

Method

To ascertain the expectations, besides using the participation-observation method, a special interview-schedule was prepared and administered to 100 adults of the community, who had at least one of their children in the school. Seven case studies were made of adults who were found very seriously attending the night school. Educational aspirations were ascertained by a special questionnaire from the 15 boys who were studying in the High Schools of the neighbouring town. Since the entire data collected in the manner indicated above, are not relevant to the theme of the present paper, the responses got for the common questions relating to the educational expectations will be analysed here.

Data

The following three questions were put to the 100 parents who participated in the interview.

(1) Why did you want your son to go to school?

(2) In what way is your educated son going to be useful to your family, farming and your village?

(3) How far do you/did you want your son to study?

The responses of the parents are tabulated below in an integrated manner. They suggest what the villages expect to gain from educating their sons.

TABLE 1

Expectations of 100 parents of the village concerning the education of their sons

	Responses	% of responses for desired benefits
1	To help the family, through his earning outside the village	30
2	To train him for a Government job	17
3	To help him to settle down in the city and thus reduce pressure on the family lands	15
4	To learn how to deal properly with Government Officials ..	12
5	To learn how to talk properly with the educated visitors to the village	7
6	To train for some service, not necessarily a Government one	5
7	To pick up knowledge is good. Education gives this knowledge	8
8	I see that X's son, who is educated, is well respected in the village. So I also want my son to be educated like him	3
9	To help overcome the exploitation of Patels . ..	2
10	No opinion	1
	Total ..	100

Responses 1, 2, 3 and 6 are more or less over-lapping categories based on the theme of 'training for a vacation' and reducing the pressure on 'agricultural lands'. These four responses account for 67 per cent of the total responses. Categories 4, 5, 8 and 9 which account for 24 per cent of the responses reflect new values of democracy and the consequent expectation from education as a tool of survival in democratic society.

Regarding the response 2, viz, 'training for a government job' further enquiry revealed that by a Government job is meant any job that assures regular income on a monthly basis, and does not necessarily mean a job with a pension.

Before commenting upon the above data, the following additional information may be given regarding the views of the members of the community about their 'expectations' concerning 'the extent of formal education desired' for their wards.

TABLE 2

Responses of 100 parents to the question "Haw far do you want your son to study?"

	Responses	% of responses
1	Up to Matriculation	78·6
2	Up to 4th standard	10·6
3	Up to B.A.	2·6
4	Some technical diploma like that of Engineering, Overseer etc.	1·3
5	Not clear in mind	6·6

In table 2, response 3 came from the only two parents in the village. They have a number of their relatives in Hyderabad who are studying at the university level. Response 4 came from the parent whose brother's son is already an Overseer in the P.W.D. of Andhra Pradesh Government.

Comments and Conclusions

The present study confirms, to a limited extent, the hypothesis that the members of a society reinterpret proffered innovations in terms of the dominant themes and existing needs of their society. Education has come to acquire a special value in this rural community. It is valued not for what it gives to the individual,—better knowledge, ability to move higher in the social ladder, or scope for a revaluation of the existing themes of the society—but, it is valued for the expectations it rouses of stabilizing the traditional social organisation, in terms of the dominant themes of the society.

Pinjerla, the village under study, exhibits a tremendous growth in mass education. Formerly, a few children attended an elementary school more or less regularly for a relatively small number of days each year and paid their fees in kind with a few seers of paddy. The system now in vogue draws nearly half the number of children between the ages of 4 and 10+, who attend a formal school for 180 days each year on a tuition-free basis.

Not merely do more children now attend school for more days, but also the standard of education accepted as the general level is that of the Matriculation in the village

There is a general faith in the formal education given in the schools The villagers feel that it is good for children; it is good for adults, and it is good for almost everyone, except for adult women. It is their belief that if a girl going to school after she is eight years old, not merely is a helping hand in domestic work taken away, but also she tends to become 'loose' in character. With this exception regarding girls' education, there is a general faith in the good that education does to the community.

What good does education do? The good is conceived in terms of three valuational themes of the community, viz. Familistic Individualism, Dharma and the traditional theme of Change*. Each one of these three themes may now be briefly considered to establish a frame of reference to the analysis of the expectations that this community has from formal education.

Today, in its classic form, the joint family may be considered more characteristic of upper castes and of the wealthier strata of society in rural parts. But the model of the orthodox, scriptural joint family still has influence everywhere in India.† This remark of Dr. Mandelbaum is illustrated by the way that parents in Pinjerla think of the education of their sons. Education is valued not in terms of what it does to the development of the individual but in terms of its benefits to the family.

67 per cent of the responses (table 1) emphasize the expectation from formal education with regard to family betterment, first by increasing the family income and secondly by reducing the pressure on lands. One parent puts it clearly thus.

> "During my father's days it was not necessary for us to get educated. We had enough lands and enough work for all. Now I have four children (he has 4 sons and 3 daughters), and how are they going to live on my land? (7 acres). Therefore, I have sent R—Reddy to Shadnagar School. If he should prove a failure in education, I shall send to school his younger brother, who is now in agriculture I want him, the educated son, to help in supporting the family, and want the remaining brothers to live happily on this land." When he was asked why he did not educate the other three sons so that the fourth may be really happy in the village, he said, "I think my lands can support my three children. If I had a little more land, I would never have thought of school for even the remaining son".

*A detailed description of these themes may be seen in, N. V. Thirtha, INDIAN EDUCATION. A STUDY IN VALUES (unpublished Ph D. dissertation). Stanford University, California, U S A.

†David Mandelbaum, "The Family in India"—Southwestern Journal of Anthropology, 1948, No. 2. P. 123.

The villagers seem to attribute the dislocation of the joint family to the two causes of over-population and poverty, and they expect school education to solve these two problems by qualifying a few young men of the village for Government jobs so that a part of the population may be drawn to the urban centres.

While the villager sees this economic advantage from school education, he also looks at it with a certain amount of suspicion which is reinforced by the theme, 'Dharma' a comprehensive value-concept. The villager sees that things around him are changing. Some he points out as good changes (e.g. change in the tenancy laws); and some, he is sure, are bad changes (e.g. lack of respect for elders and caste rules, among the young people). Seventy-six per cent of the responses to the question, "Are you better off/worse off/or about the same as your parents?" indicated that they were worse off and the cause was given as 'increasing adharma' in the community. This attitude towards social change fits in with the traditional view of life of the cyclic changes of dharma and adharma accompanied by the periodical births of 'avatars' or 'wise-men' to remind the erring world of the path of dharma, established 'in perfect form' long ago.

The villager in Pinjerla attributes to the formal education the ascriptive quality of increasing adharma, as he notices that those who go through the schools have scant respect for tradition, caste-rules and elders. So he does not expect much benefit in this regard. In a sense, education is 'a necessary evil' which must be used for the limited purpose of easing the economic situation. For this purpose High School education is ample. To the question, "Why don't you educate your son higher than Matric?" Some of the responses were that "highly educated people (ekkuva chaduvinavaru) tend to become aggressive, selfish, irreligious, trying to exploit others; they do not care for caste rules or what the elders say" Four Harijans even said, they tend to become Christians and so schooling should be discontinued after the 4th grade.

There are a few specific expectations from education which indicate an effort of the members of the community towards internalizing the introduced values.

The villagers are aware that after Indian Independence both the Government and various other social welfare agencies are trying to benefit them by various schemes. They are suspicious that the revenue and police officials (of the low cadre) may be taking advantage of their illiteracy to benefit themselves by questionable means. A Harijan adult of the high school gave the following reply to the question as to why he wanted to attend the right school (i.e. summer literary classes).

> "These days the government wants to give us a lot of money to build houses and buy bullocks. But these *kapoos* (Reddy Patels) take away most of the amount and take our thumb

impressions on some paper......... If only I can read what the *kapoos* write on those papers, they cannot deceive me as they are doing now."

These suspicions about patels and patwaris are reinforced by the propaganda of a few political parties in the area. Therefore, one expectation that the villagers have from schooling is that it will act as an armour against any violations of the rights assured to them by their democrat government. Education is expected to help them to derive all the benefits from the governmental schemes.

To sum up, the main expectations that the members of this rural community have regarding formal school education as supported by the dominant themes of rural culture are:—

1. Education for service (vocation) to improve the family economy.
2. Education to reduce the population pressure on family lands.
3. Education as a tool of survival and of adjustment in the changing democratic society.

Occupational Information Programme in Guidance Work

F. S. Chothia

Shri F. S. Chothia is the Officer-in-Charge of the Institute of Vocational Guidance, Bombay. In this brief article he outlines the need for occupational guidance in our schools and suggests how the teachers should prepare themselves for it. —Editor

In the minds of most teachers—and also, unfortunately in the minds of a few guidance workers—the term "Guidance" brings visions of psychological tests. Such tests are fascinating and also very useful. Unfortunately the over-emphasis on psychological tests results in the neglect of occupational information as a guidance programme.

There are many good reasons why an occupational information programme is necessary in our country today. The basic problem before guidance workers today is "to see that the teachers who will be doing guidance in our schools are thoroughly trained. At the same time we have to see that all schools in the country are provided with some kind of guidance service". This problem has cropped up at various guidance conferences and the solution suggested is that in multipurpose schools, we should have thoroughly trained full-time school counsellors or part-time teacher-counsellors. and in the remaining schools we should have career masters whose main job would be the dissemination of occupational information. Since the number of non-multipurpose schools greatly outnumbers that of multipurpose schools, it is obvious that the guidance service in most of our schools will essentially be an occupational information service.

Even in schools having school counsellors or teacher counsellors the need for occupational information is just as great. A counsellor who knows only psychological testing and has no knowledge of the world of work is a very poor counsellor indeed. Pupils need to know not only where their aptitudes lie; they also need to know where the relevant training institutions are situated, the contents of training, the avenues of employment after training, starting salaries, future prospects, etc.

On administrative grounds also, occupational information programmes are necessary in India today. In view of the paucity of guidance personnel and the huge numbers of pupils to be guided, State

Bureaus of Guidance and their regional and district officers have to take recourse to mass techniques of guidance which really boil down to programmes of occupational information.

There are several means by which a teacher can disseminate occupational information—giving class talks, screening career-films, arranging visits to places of work, organising career exhibitions, setting up the career information centre in the school, etc In the State of Maharashtra schools having career masters on the staff must provide a week in the standard X time-table for such guidance work. Pamphlets on careers and other guidance material are obtainable from the Central and State Guidance Bureaus, the Directorate-General of Employment and Training, the State Directors of Employment and Employment Exchanges, etc Non-official agencies like the Y.M C.A. and Rotary Clubs have also published useful guidance literature.

Teachers engaged in disseminating occupational information in schools should keep in mind some important points:—

(a) their job is to provide information only. Being teachers, they will always be tempted to go further and advise pupils on the choice of their careers. Such advice, however well-meant, can often do great harm

(b) they must have up-to-date information at their disposal. Every year changes take place in training programmes, methods of recruitment, requirements of jobs. Giving obsolete information amounts to giving false information.

(c) the giving of occupational information can be as interesting as the teaching of any subject. All the 'tricks of the trade' employed by teachers in teaching other subjects can be used to enliven the period set apart for occupational information programmes.

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Democracy in Schools

K. L. Gandhi

It is gratifying to note that projects, large and small, are being tried out by various secondary schools all over the country. There are no hard-and-fast rules about experimentation in schools. The main criterion is that, whatever the project, it should be clearly conceived, ably planned and carried out efficiently with the willing co-operation of all concerned. The real success of such experiments is to be seen in the improvement brought about in the behaviour and attitude of the pupils.

Below is a report of some simple experiments tried in a Higher Secondary School in Delhi by Shri K. L. Gandhi, whose main purpose was to promote a democratic atmosphere in the school. —Editor

India is wedded to a democratic form of government. As such, educational institutions have a definite obligation to train the future citizens in the democratic way of life. This training can be imparted effectively only when democracy permeates all the activities in the school. In the following paragraphs, a few experiments have been described which illustrate the advantages of the democratic approach in the administration of school. These experiments were conducted in a Higher Secondary School (let us name it X) of Delhi. The school has an enrolment of about 1,100 boys—and half of them hail from the villages and the other half from the urban localities.

Objectives

The experiments described below were organised with the following objectives:

(a) To provide opportunities of self-expression to students.

(b) To encourage greater participation of children in the administration of the school.

(c) To train children in democratic leadership and intelligent following.

First Experiment

The school had a 'Suggestions Box' made and placed at a spot convenient to the boys so that they could drop their written suggestions or complaints into it. They were free to give or not to give their names on their suggestion-slips. Some of them did give their names,

while others chose to keep them secret. In order to infuse confidence among children, the box was opened every evening by the Principal himself. Useful suggestions were read out in the morning assembly in the presence of all the children. In such cases the names of the students who gave these suggestions were also read out. This encouraged other pupils also to give in their suggestions. The staff and the Principal always made a sincere endeavour to give a practical shape to any useful suggestion coming from the students. For example, once a suggestion was received that the school library should have four to five sets of text books on each subject, so that poor students who could not buy books, or students who sometimes lost books and could not replace them immediately, would be able to use these books in the school library. The suggestion was accepted and implemented. Besides, the suggestion box was also used by students to communicate to the Principal their requests for a holiday or a fine day celebration, complaints against the efficiency of the teachers, complaints against the school tuckshop, grievances against the class-monitors or the inadequate equipment in the class-room, their opinions on various activities of the school and so on—this was something that had not been done earlier.

Evaluation and Results

(a) It served as a very useful medium of knowing the suggestions and grievances of students—real or supposed.

(b) The complaints received in the suggestion box sometimes became a starting point for a new project. To give an illustration, once the classes which had to sit in the tents complained that they did not get a good position in the inter-class 'Health Parade' competition, because they had been given dusty 'classrooms.' They suggested that each class should take its turn in sitting under the tents. The matter was discussed with all the classes and they were advised to take the responsibility of finding a solution to the problem themselves. The classes unanimously agreed to take their turn in plastering with mud the area under tents twice a week till the brick flooring could be laid.

(c) It helped the school authorities to obtain ideas and suggestions in regard to the effective working of the new projects launched in the school.

Second Experiment

The second experiment was that of introducing the 'Prefect-System' in the school.

From amongst the senior pupils, about two dozen responsible boys recommended by the teachers were selected as school prefects, and were divided into six teams, each team consisting of four prefects —one of whom was to act as the head of the team. Each team was attached to a teacher who was the 'Officer on Duty'. Every day, one team of prefects along with its 'officer' was on duty. Under the guidance

of their 'Officer', the prefects conducted the school assembly, maintained discipline when students moved from their class rooms to the prayer-ground and back, looked to the sanitation and water arrangements before the school started and gave suggestions for the improvement of the school which the 'Duty Officer' incorporated in his report for the day. As far as possible, the head prefect was given the opportunity to make all announcements at the morning assembly. During the recess, the prefects performed their duties which were to see that no student crossed the school bounds or damaged the school property or quarrelled with his fellow-students or did anything which was unworthy of a good student. No prefect was allowed to miss any of the teaching periods, but he was on duty before the teaching work commenced or after it was over.

In the monthly forum of prefects and class representatives, presided over by the Principal, students' difficulties were discussed. Students were free to bring up any issue at these meetings. The senior-most teacher in the school was also present because he was intimately associated with all the projects working in the school. Other teachers were not at these meetings lest in their presence, students should hesitate to express themselves freely. Sometimes specially nominated students attended the meetings which were informal and in which all students were free to bring up any issue that they wished to discuss.

Evaluation and Results

(1) Students got a very good training in leadership. At the initial stages, the teachers had to help them in organising and controlling student assemblies; but after some experience most of them could do this work independently and very satisfactorily too.

(2) With the senior boys helping in the administration of the school activities, the work of the teacher in this respect became less heavy.

(3) Having been placed in a position of responsibility, prefects tried to set an example of model behaviour to the rest of the students. Thus the senior boys became a very valuable asset. They were never a source of trouble as is so often the case in some schools.

(4) It trained and stimulated the children to think in terms of the welfare of their school and their school-fellows.

(5) It led to a better appreciation of the school policies and regulations.

(6) It helped to establish a rapport between the Principal and the students through their representatives.

(7) Sometimes, solutions to knotty problems were also evolved at these meetings. To give an example, the school staff was greatly baffled by the problem of the students copying at the annual examination. The Principal decided to discuss this issue at the Prefects'

meeting to be held just before the annual examination. He announced at the morning assembly that class teachers would depute from each class one more student of their selection to that day's meeting. The staff were confidentially advised to depute such students to that meeting as were most prone to resort to unfair means at the examination.

When the meeting started, the Principal explained to the students that at the last annual examination, several students were punished for copying and that perhaps some of them might have got heavier punishment than what they deserved. With a few more remarks, the Principal suggested that it would be better to draw up a list of various malpractices that students adopted at the examination so that precautionary measures could be taken. This, he said, would reduce the punitive measures to the minimum. It is not necessary to give here the revealing list of precautionary measures suggested by the boys, but the results of this meeting were most gratifying. All children in the school came to know that now the teachers knew their trade-secrets. Somehow, a climate was created in the school against copying. Precautions suggested by the boys were implemented and the incidence of copying was reduced immensely.

(8) In the first year of the project, the prefects were selected and not elected because they were new to the idea and the school too, was unfamiliar with the system. From this session, the students will themselves elect their prefects.

In this way, they will gradually learn some of the basic principles of democracy—the principle of election, cooperation, joint responsibility and free discussion.

Zonal Conference of the Extension Services Departments (Eastern Zone)

The annual conference of the Directors and Co-ordinators of the Extension Services Departments of the Eastern Zone was held on the 13th and 14th of February 1960, at the Teachers Training College, Ranchi. The Principal of the Extension Services Department attached to this College directed the conference, in which all the 10 Departments in the Zone were represented. The Co-ordinators from David Hare Training College, Calcutta and Santiniketan and Gauhati University and the Honorary Director and Co-ordinator from the remaining Centres, i.e., Cuttack, Bhagalpur, Patna, Turki, Ranchi, Hooghly and Alipore (Calcutta) attended the conference. The D.E.P S.E. was represented by the Administrative Officer, Shri D. D. Mathur.

On the first day of the conference, the delegates presented reports of the activities of their Departments and also put questions on points raised in them, the more important of which dealt with intensive work in schools, follow-up work, organisation of Central Science Clubs, making library services effective and interesting, provision of grants for different projects undertaken by the schools, provision of grants for the purchase of Indian publications for the Extension Libraries, seeking permission from the State Directorates or Universities for leaving headquarters for Extension Services work.

On the 2nd day, the discussion on the items of the agenda included T.C.M. equipment, the remuneration for demonstration lessons by Training College staff, Central Science Clubs, follow-up work, appointments and miscellaneous matters. The problems raised by the delegates and the suggestions made by them are given below.

(1) *T.C.M. equipment.* The delegates stated that they had experienced difficulty in using equipment such as the silk-screen printing outfit for want of trained technical personnel. There was also difficulty in developing positive films for the film-strip camera and also the problem of how to meet the cost of films and the preparation of film-strips and slides. An electric generator was needed for use in the rural areas. The delegates suggested that a whole-time technical assistant, trained in the use of the audio-visual equipment received by the Extension Services Department, should be appointed; and that the developed film reels should be sent to the Agfa Company, Calcutta for being turned into positive films that can be used for the film-strip camera, (the Hooghly Department has adopted this programme); that the electric generator from the David Hare Training College could be spared to the Santiniketan Department as it

was not essential for the former which is situated in an urban area. (Santiniketan too has since received an electric generator despatched in Feb., 1960 by the D.E.P.S.E.).

(2) *Appointments.* The appointment of an Assistant Co-ordinator was discussed.

The delegates felt that since the Extension Services Department was becoming more and more popular day-by-day, one Co-ordinator could not cope with the demands of the schools for various activities, and that therefore an Assistant Co-ordinator should be appointed early to deal with the additional work.

(3) *Funds and Allotments.* The delegates discussed the question of reappropriation of funds for the next financial year and that the allotment of some funds for refreshment to participants and also a grant for the purchase of Indian publications for the Department Library

It was felt that the grant unspent during the year should not be treated as a saving as it ceases to be the funds of the Department at the end of the financial year As for refreshments Rs. 250 have been provided under this head. It was suggested that the State and Central Governments should be requested to provide money for the purchase of Indian publications for the schools which the Extension Services Department served.

(4) *Remuneration.* Should remuneration be given to the members of the staff of the Training College delivering demonstration lessons in high schools specially in the rural area, and to the Honorary Directors for performing units of work in the Extension Services Department and to the Co-ordinators when they work as resource personnel?

The delegates felt that remuneration should be given to the members of the Training College staff from the head 'Remuneration to Resource Personnel.' when they conducted demonstration lessons. They felt that the Honorary Director should also receive remuneration for performing units of work in the Department when he worked in the capacity of a resource person. However, the Co-ordinators should not get remuneration for serving as resource personnel for their own Zones; but when they went to other Departments they should be eligible for remuneration

(5) *Central Science Club.* The question of the possible location of the Central Science Club when accommodation in the Training College is not available was considered together with the methods of tackling the difficulties in organising the club.

The Central Science Club could be located in any one of the schools in the area with the consent of the headmaster. The success of the Science Club Movement depended on the active and willing cooperation of the science teachers and so the Department should see that the teachers are interested in the organisation of the clubs.

(6) *Follow-up work.* The main problem was how to make the follow-up work real and effective and the kind of programme that should be drawn up.

The delegates were of the opinion that follow-up work is extremely important and that it may be effectively carried out by (1) Personal Contact, (2) Lesson Supervision, (3) Follow-up seminars, (4) Circulation of Questionnaires, (5) Securing the Cooperation of Headmasters—both in the selection of suitable staff and in evaluation of the work and also taking the help of the inspecting officers.

The editing of materials for publication such as reports and papers etc. presents some difficulty because there is no adequate staff for such work.

This problem could be eased if an Assistant Co-ordinator is appointed and if the resource personnel and the Director of Courses is requested to hand over papers in a finished form to the Co-ordinator before they leave the seminars.

The restrictions on the use of Jeep presented a problem.

It was suggested that the Extension jeep should normally be used only for Extension work. However, in cases of emergency it is recommended that the jeep may be made available for private use to the Directors and the Co-ordinators at the rates which are admissible for the Central Government employees.

Miscellaneous Problems—Several other problems were considered during the conference—out of which the salient points are summarized below—

(1) The need for clarification regarding the nature of the intensive work to be done by the Extension Services Department.

(2) The difficulty of finding suitable resource personnel.

(3) The provision of travelling expenses for participants in meetings of study circles, subject teachers' associations and science clubs organised on the zonal basis for the rural areas.

(4) The question whether the Co-ordinator will be treated as on duty if he is to be out of station during the course of this work, and whether he is entitled to travelling allowance and daily allowance on such occasions.

(5) The relation between the Inspectorate and the Extension Services Departments.

(6) The non-implementation of the resolution (Cuttack Conference) on periodical meetings of the Estate Directors and the Co-ordinators.

(7) Difficulties of arranging afternoon courses during the working term in schools

(8) The organisation of courses on request from schools.

The delegates suggested the following solutions to the problems mentioned above:—

(1) One or two projects or activities should be undertaken as intensive work in a few schools and their results should be carefully evaluated.

(2) The Co-ordinator should try to find out resource personnel with the help of the College staff. It is felt that if the grant from the Directorate is made available earlier in the year, this problem would definitely be less difficult to solve.

(3) The delegates suggested that the travelling expenses of participants in such courses as mentioned above should be met from the TA and DA funds granted by the State Governments to the participating teachers.

(4) The Co-ordinator should be treated as on duty when he goes to contact the resource personnel or to procure equipment for the courses that he proposes to organise. As far as possible attempts to contact the resource personnel should be made through postal correspondence.

(5) It was suggested that the Directorate of Extension Programmes may contact the State Directorates of Education to request them for the active co-operation of the State Inspectorate in the programme of the Extension Services Department. The State Education Departments could also direct the schools to produce the records necessary in connection with these activities when required by the Co-ordinator who may be permitted to supervise some part of the teaching in the schools.

(6) The delegates suggested that since periodical meetings of Directors and Co-ordinators would benefit the Extension Services Department, such meetings should be convened regularly for exchange of views between different Centres.

(7) Such difficulties as arose with regard to the organisation of afternoon classes may be overcome by individual Centres with the co-operation of the headmasters of the schools concerned.

(8) It was felt that on demand from the schools, courses on subjects already dealt with by the Extension Services Department may be given, provided that these do not interfere with the other activities of the Department.

Book Review

The Dynamics of Education: Liamye, D. J. Usha Prakashan, 162, Morbaug Road, Dadar, Bombay; 1960. Price Rs. 12.60 or Sh. 20/-.

For any programme of education which aims at the highest individual development, a thorough understanding of the philosophy of education and psychology is absolutely necessary. These two systems of knowledge, according to the author, can be rightly called the Dynamics of Education as they are "vital forces in deciding and helping the possible evolution of man." The book, therefore, deals with the growth and development of the philosophies of education and of psychology and the implications of both for various aspects of educational development, more specially in the Indian context.

The book is divided into three parts The first part deals with philosophies of education and their implications. The main philosophies of education and educational thought of ancient times in the East and West, have first been historically traced briefly, so as to show how modern philosophies have evolved out of them. Then follows a presentation of the various philosophies—Idealism Naturalism, Realism and Pragmatism in comparison and contrast to each other. The aims of education, the different bases of education viz. sociological, psychological, biological and philosophical, have been discussed. The author wholeheartedly supports a democratic philosophy of education as it is most conducive to the "self-realisation of the individual and through it, for active constructive work for the common good." A democracy, he maintains, is also congenial for the preservation and development of culture, because in it there is no cleavage between the leisured class and the working class.

The book deals with education in its relationship to social reconstruction, national culture, economic order, international understanding, and religious and moral education. Sound educational programmes should furnish, along with their theory, a scheme of life and values, because this has its influence on the entire social structure. The most serious defect from which education in India suffers at the moment is, according to the author, the total lack of moral instruction. It is pointed out that even Basic Education suffers from this defect. Religion has been interpreted here broadly as "Love of God" and a synthesis of religion and morality (which the author describes as "love of man") is sought in the universal law of love. A programme of moral education, somewhat on the lines of the Radhakrishnan Commission report, has also been worked out.

The second part of the book can be said to be its very special and unique feature. It is devoted to the Ancient Indian Psychology of Patanjali or the science of Yoga. The whole text of Patanjali's Yoga Sutras has been given here in Sanskrit, and what is most revealing is the author's interpretation of these Yoga sutras, in which he has shown remarkable skill. Perhaps it would have added to the usefulness if the translation of the Sanskrit text was also given along with it, sutra by sutra. The reader finds the translation, however, in the next chapter.

In the third part of the book, the author deals with advanced educational psychology or Western psychology. Under this, general problems of learning and integration of character and personality have been discussed. Separate chapters treat subjects such as motivation, vocational guidance and selection, concept of mental health, mental disorder and mental hygiene in a mad world. Of these, the last two make very interesting reading. In the chapter entitled "Retrospective and Prospective," the author makes a comparative study of the psychologies of the East and the modern West. The author takes a bold stand in the face of those who do not see eye to eye with the school of Indian psychology. He tries to carry the conviction to the reader that "Chitta—Vritti—Nivodha"—Training of the mind as the medium of knowledge and the creative principle in man, "Pratyahara"—detachment of the senses from the phenomenal world and "Samadhi" concentration, sanyama—are the highest type of goals education can have for itself, and in this attempt, he has succeeded to a large extent

Apart from the interesting and meaningful content of the book, it has been written in a very lucid and pleasant style which attracts the reader in no small measure. The book deserves a perusal by all interested in education. It would be a very useful addition to libraries of Training Colleges or University Education Departments for intensive study by prospective teachers and educators.

P. D. SHARMA

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EDITORIAL

A co-ordinated effort is being made to put guidance work in secondary schools on the 'map' during the Third Five-Year Plan. The teacher, the guidance worker and the parents have to work together to make an effective contribution to the healthy all-round development of the school child. Each has to know his role and his duty in relation to the programme that is to be carried out in the secondary schools. The objectives and the goals have to be clarified so that a maximum effort can be made by each.

Some suggestions on the scope and content of training of each of these categories of persons include the involvement of each, to the extent possible, in the practical projects and investigations regarding behaviour problems, that the specialist will conduct as part of the total guidance programme in schools. He will readily secure the willing cooperation of the non-specialists, that is, the teacher, the headmaster and the administrator, as well as the parent and guardian, if he takes pains to make them understand that guidance services in schools are directed towards fostering the best growth of all children and are not intended to serve the needs of the maladjusted pupils only.

In fact, if parents as a group could be made interested in this task through a programme of orientation and suitable training, they would be a strong force of resource persons for the guidance specialist to study children's ways of living, their methods of study and their ways of doing things. In this respect, much has yet to be done to develop Parent-Teacher Associations in such a way that the parent's special knowledge of the child can be effectively utilised by the specialist to improve the child's education in school.

Both these aspects of guidance work were underlined in the Seminar of Career Masters of Multi-purpose Schools in Madhya Pradesh, held at Jabalpur in the early part of 1960. The participants recommended that a school committee to enlist the support of the school staff for the guidance programme should be set up, and that orientation of parents and guardians to the guidance programme should be secured through parent-teacher associations by means of home visits, conferences on careers, parent's day celebrations, etc. The Seminar has suggested ways of closer liaison between the specialist and the officials of the Vocational Guidance Bureau of the State.

One suggestion that may be examined by the State Bureau is that the staff of the State Bureau should visit, at least once a year, the multipurpose schools in the State to study and assess their guidance activities and provide opportunities to the school staff to discuss their problems. If such a contact is practicable between the schools and the Bureau, it would certainly be fruitful. In large States, however, such a course may not be possible. Perhaps some sort of nucleus regional advisory service could be provided by the Vocational Guidance Bureau for regions which are distant from its headquarters.

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The specialist in guidance work must also develop the right attitude towards his job. Training equips him merely with technical knowledge; but unless he has faith in his work, his contribution to assisting young pupils to solve their emotional and educational problems will be comparatively insignificant. Faith and zeal are pre-requisites for an effective guidance worker and these qualities should be borne in mind when selecting persons for this important service in schools.

In an investigation, conducted in Bihar State in 1959 on the attitude of trained guidance personnel working in the different parts of the State, it was reported that although nearly 50 p.c. of the people believed that there was a bright future for the guidance programme, provided that, of course, the necessary conditions were created, the majority felt that economic incentive is one of the necessary conditions, and in this respect, there was an impression that the Government itself is not enthusiastic about the scheme. Whether the impression was based on facts or not, so long as the field workers have such impressions, their work is likely to be half-hearted Measures have to be taken to instil confidence about the programme into those who are responsible for implementing it, so that the programme may achieve the goal that it has set before it.

Teachers Training College occupy a key-position in educational reconstruction programmes because they produce the teachers who have to shoulder the weight of implementing the scheme for raising and improving the quality of education imparted in the secondary schools.

Although many teachers' colleges are doing good work, there is little doubt that the majority do not produce the type and calibre of teacher required for our ambitious programme in secondary education. Few would dispute the fact that today there is a gap between what we expect from the training colleges and what they are actually able to offer.

The criticisms levelled against the present courses of training offered in the teachers' colleges are familiar; that they are bookish, theoretical, not practical enough to equip the teacher for actual classroom work; that they have not changed even through the syllabi in primary and secondary schools have undergone radical changes in content and in objectives.

It cannot be denied that these criticisms apply in general to the majority of teachers' colleges in the country. But it would be unduly pessimistic and certainly not realistic to assume that training colleges *en bloc* are resistant to healthy change or are unaware of their limitations. Many of them are keenly alive to the need for revision of their syllabi and teaching methods to bring them in tune with modern educational philosophy. This is evident from the deliberations of the Conference of the Principals of Training Colleges held at Bangalore in May, 1957, which endorsed the recommendations of the B.Ed. Syllabus Revision Committee, particularly with regard to the content of the practical course. The need for change in the Syllabus has been generally accepted. In fact, many training colleges, particularly those that have Department of Extension Services attached to them, are giving serious attention to the question

of introducing more vital and practical courses of instruction and methods of teaching to provide a broad-based programme of training. The recommendations of the B.Ed. Syllabus Revision Committee and of the Conference indicate the direction in which change is required. The content of the course has to be deepened; its practical value enhanced. Whether the duration of the training should be changed or whether the number of working days should be increased or whatever other changes may be necessary, there is no doubt that immediate action on a countrywide scale to implement these recommendations is the irresistible need of the hour.

Extension Services Newsletter

The reports of August and September have been combined in this newsletter

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North-Western Zone

The Department of Extension Services, Patiala, organised a 5-day seminar on social studies which was attended by 40 teachers. They discussed the place of practical work in Social-studies, the need for correlation of social studies with other subjects, physical environment and the place of map drawing in the teaching of geography. The Co-ordinator visited 5 schools and discussed with the members of the staff various subjects such as the use of school broadcasts, the causes of deterioration in the standards of teaching and the ways and means of improving them. He also arranged shows of films and film strips relating to the teaching of social studies and gave detailed guidance on the working of the audio-visual apparatus. The Department screened 15 films and loaned 50 books.

The Department of Extension Services, Chandigarh, arranged a symposium on: "Why did I choose to become a teacher?". The speakers included a principal of a college, an officer of the Education Department, a headmistress, a teacher, a university professor and a B Ed. student. They explained how they were attracted to the teaching profession and why they continued to stick to it. Dr. V. B. Taneja and Shri Sinha, Evaluation Officers of the Directorate, made valuable suggestions on internal assessment at a meeting of local headmasters and headmistresses arranged by the Department. Dr. Woodman of the Ford Foundation and Shri A. H. Hemrajani, Field Adviser of the Directorate, were both present at a special meeting of the local heads of schools convened to discuss the work of the Department. Shri Hemrajani also addressed a meeting of local teachers at Nangal. He explained the scope of the Extension Services at a meeting of the staff and the trainees of the college The Department organised a 4 day seminar on the teaching of the mother tongue. Twenty-seven teachers participated and discussed the problems of teaching the mother tongue, the dynamic methods of teaching and inculcating reading habits among the students and teachers. The participants were also helped to prepare teaching aids of various kinds. The Department also organised a workshop on school projects for about 100 teachers at Nangal, who in four groups, worked out some projects on general knowledge, teaching methods, examinations and co-curricular

activities. A week-end training course in design making was arranged for 17 drawing teachers of local schools. The Co-ordinator visited four schools to discuss cumulative record cards, evaluation, school beautiful project and the formation of the parent-teacher associations.

The Department of Extension Services, Jullundur, organised refresher courses in higher mathematics and general science which was attended by 22 mathematics teachers and 35 general science teachers from various higher secondary schools of the area. The general science course dealt particularly with the units of astronomy and agriculture included in the syllabus for higher secondary classes. In collaboration with the Divisional Inspector of Schools, Jullundur Division, the Department arranged two seminars for heads of high and higher secondary schools and the assistant inspectors of schools. The first seminar held at Kulu for a period of three days, was attended by 20 teachers. In addition to educational and administrative problems discussed, the Co-ordinator impressed on the participants the urgent need of introducing cumulative record cards in the schools. A similar seminar was also arranged for participants of Gurdaspur District. The audio-visual section of the Department prepared one more film-strip entitled: "The Solar System."

The Co-ordinator of the Department of Extension Services, Jamia Millia Islamia, New Delhi, visited fifteen schools along with some members of the Department. On some of these visits, Dr. E. M. Woodman of the Ford Foundation, also accompanied the Co-ordinator. Shri G. Ramachandranji addressed a meeting of 200 heads and teachers of some of the schools on the "Impact of Basic Education on Secondary Eduction." The Department also arranged a symposium on the teaching of mathematics and science at the Government Higher Secondary School, Malaviyanagar. Two meetings of the study circles in Hindi and English were held. In another meeting of the study circle of English teachers' association the structural approach to the teaching of English was discussed. In yet another meeting of the study circle of Hindi teachers, the participants discussed common mistakes in pronunciation. Fourteen films were screened and about 100 books were loaned to the schools.

The Co-ordinator of the Department of Extension Services, Udaipur, visited three schools regularly along with some of the college staff to help the teachers individually in the construction of new-type tests in their own subjects. The members of the college staff too gave demonstration lessons at four local schools. Shri P. D. Sharma, Evaluation Officer of the Directorate, conducted an evaluation workshop for the teacher-trainees of the college, and addressed a series of five lectures on "Modern Evaluation Techniques". The Co-ordinator visited two schools selected by the Rajasthan Government under their Pilot Project Scheme to assess the work of the schools.

The Department of Extension Services, Central Institute of Education, Delhi, arranged the following seminars on:

(1) How to create an interest among the students in reading Hindi for pleasure. (2) The teaching of biology. (3) The problems of

teaching art in schools. (4) The teaching of science. (5) Education for international understanding. (6) Moral and religious instruction in schools (7) Problems of new teachers in the first year of their teaching.

The first 3 seminars were attended by 34, 15. and 22 teachers respectively. Shri P. N. Kirpal, Secretary to the Government of India, Ministry of Education, directed the seminar on moral and religious instruction in schools. Shri S Ramanujam addressed a meeting of the teachers' study circle on "Education in Madras". The research study circle discussed the carry-over of linguistic habits from Hindi to English. Two meetings of the principals of the associated schools were held to discuss the future programme of the Department and the organisation of science clubs in schools and another follow-up meeting on the problems of teaching art in schools were also held. A workshop on educational administration and supervision for inspectors and heads of schools was directed by Dr. J K. Norton of the Columbia University. Two short courses on the implementation of new syllabi in English and in Hindi respectively were arranged. At a meeting of the research study circle. Dr. Kshanika Bose spoke on the study of personality patterns of a group of institutionalised delinquent boys At the meeting of the teachers' study circle, film-shows consisting of films on "Indian Art through the Ages" and "Palace of Science" were exhibited. The Co-ordinator visited eight schools for the assessment of the work of the science clubs.

The Department of Extension Services, Ferozepur, celebrated a teachers' week, during which talks on educational topics, demonstration lessons and cultural programmes were arranged by teachers at different schools. The Co-ordinator was invited to address a headmasters' conference on the 'Modern Trends in Education'. The Department also arranged a talk on the concentration of mind and educational psychology followed by a practical demonstration In a meeting of the teachers' study circle the members discussed the philosophy of life. The Co-ordinator visited 12 schools.

The Department of Extension Services Bikaner, organised four demonstration lessons. Two of these lessons were for the teaching of English and the others related to the teaching of mathematics and social studies. Two symposia on the problems of teaching English and mathematics respectively were also arranged. The social studies teachers' study circle held three meetings and the English teachers' study circle held two meetings. The Department also convened a meeting of local high and higher secondary schools to discuss the programme of activities of the Department with the different schools.

The reports of August and September, 1960 have ben combined in this Newsletter.

Northern Zone

The Department of the Extension Services, Meerut. arranged a one-day programme at Darula where a lecture on the structure of the human body was arranged The torso model was used for the

lecture. The Department also organized another lecture at the A. S. Inter College, Mowana, on the "Recent Developments in the Teaching of Science." The Co-ordinator visited eight schools in the area in connection with the library services and arranged two exhibitions of books, maps and charts.

The Co-ordinator of the *Department of Extension Services, Government Constructive Training College, Lucknow*, helped in a workshop for lecturers for the pre-engineering classes and also paid a visit to Kolvin Talukdar College to examine the working of science clubs. Along with the Honorary Director he visited the Kalicharan Inter College to discuss the items for inclusion in the cumulative record card. A training course for art teachers of higher secondary schools was arranged by the Department. 15 teachers attended the course which consisted of general discussions and practical work in drawing, painting and preparation of audio-visual aides. The Co-ordinator visited three of the schools also. The Department arranged seven film shows; and the library services were maintained as usual.

The Physical Education Workshop arranged by the *Extension Services Department, Isabella Thoburn College, Lucknow*, came to a close during the period under review. The Department is working on an illustrated publication for the guidance of the participants. Another activity undertaken by the Department is to guide the schools to encourage pupils to participate more actively in the school programme. Small projects like "the History of Lucknow" the Customs of Women in various parts of U.P. and India, "the Industry of Lucknow" etc., are being tried in local schools. Meetings of the photographic clubs for women teachers of science are being held regularly during the evenings. The library and the audio-visual services of the Department were maintained as usual.

The Department of Extension Services, Aligarh, observed an Extension Services Day when 24 geography teachers of local and mofussil schools participated in a seminar on the teaching of geography. The scope of the subject and the various difficulties which were experienced in teaching it were fully discussed. Several filmstrips were shown to the participants. The Department organized a meeting of the school librarians where Shri T. P. Saxena, Lecturer in Library Science, Muslim University, Aligarh, conducted a discussion on "Cataloguing" The Co-ordinator visited five schools during the period under report. Shri A. H. Hemrajani, Field Adviser, D.E.P.S.E., paid a visit to the Centre on the 28th of August. He discussed the programme of intensive work with the heads of the schools that he visited and participated in a special conference of inspecting officers and headmasters of local schools. He discussed the future programme of the Extension Services Department. The library services were continued as usual.

The Co-ordinator of the *Department of Extension Services, Allahabad*, accompanied by the English and Hindi lecturers of the Institute visited the Gomti Inter College, Phulpur, Allahabad district

and discussed the various problems relating to the improvement in the teaching of the two subjects. The Department convened a meeting of the Principals of the associated schools to draw up the year's programme and discussed other connected matters at the beginning of the school session. Some of the suggetions made at the meeting were that (a) the Principal should give more attention to follow-up activity; (b) more seminars and workshops of short duration should be organized in the institutions themselves; (c) as far as possible, not more than one activity (seminar, workshop, etc.) of three or four days duration should be organized each month: (d) demonstration lessons on selected topic should be organized more frequently and the principals should encourage their teachers to give such lessons. The Department also arranged meetings of study circles in geography, history, science, Hindi and mathematics. Among the subjects discussed were the teaching of locational geography, student activities in the teaching of history, the teaching of English composition at the higher secondary school level and the teaching of Hindi poetry. The Co-ordinator in his visits, discussed problems of individual schools in 11 schools and advisory and guidance services in five schools. Seven films were screened at two local Inter colleges, and the library services were maintained as usual.

With the assistance of Mrs. M. B. Nardin of the USIEF, the *Department of Extension Services, Agra*, has been doing intensive work in the teaching of English in the B. R. High School and the Model School of the College. The activities included supervision of lessons, discussion with teachers and the preparation of detailed plan of work. The speech training classes are also being held under the auspices of the Department.

The Honorary Director and some members of the staff of the *Extension Services Department, Bhopal,* visited 15 schools to give guidance to teachers on the experimental projects to be taken up by them. The Department also encouraged teachers to enrol themselves as members of the Bhopal teachers' club. A photographic club has been started by the Department and its membership has now increased to 56. In regular visits the Department is giving necessary assistance to the Cambridge Higher School. Bhopal in the completion of the project that it has undertaken.

The Department of Extension Services, Dewas, arranged a symposium on the "Necessity of Arithmetic in Examinations," in Malhar Ashram in Indore in August, 1960. The difficulties of the present examination system and the methods of overcoming them were discussed in detail. Dr. Spencer of the British Council visited the Department and gave useful talk on the "Structural Approach to the Teaching of English and the Need for Vocabulary Control."

A course on the structural approach in the teaching of English was arranged by the *Department of Extension Services, Benaras.* 13 participants from Banaras, Jaunpur and Ghazipur districts

participated. The Department also conducted 3-day evaluation workshop in methods for 13 teachers of the participating schools. During the same period an evaluation workshop in science was held. A seminar on audio-visual aides was attended by 30 participants from Banaras, Jaunpur, Ghazipur and Gorakhpur districts. A number of films and filmstrips were exhibited on the occasion.

The Department of Extension Services, Raipur, arranged two meetings of the "Principals' Forum" to discuss the problems arising out of the conversion of high schools into higher secondary schools. The study circles in Hindi, English, science and social studies started their work in the current academic session. The Department also organized an educational gathering of local teachers for a period of 3 days when participants discussed the problems of internal assessment in the schools. The Co-ordinator visited 20 schools and inspected two science clubs during the period under review.

The Department of Extension Services, Jabalpur, continued the 3-month training course in audio-visual aides. The participants have been trained in the use of the tape recorder, the filmstrip projector, the camera etc. The Department also organized lectures on practical geography. Two experimental projects to assess the effectiveness, the various methods of teaching English and the comparative evaluation of the activity and the methods of teaching in the fields of general science and social studies• have been undertaken by the Department at the Model School attached to the Training College. Ten films were screened at various schools during the period under report. The Principal and the Co-ordinator visited Satna, Panna and Chhatarpur and spoke to the members of the staff of local schools about dynamic methods of teaching. They also visited Demoh for the inauguration of the meetings of the study circles of science and social study teachers.

Eastern Zone

The *Department of Extension Services, Gauhati*, has undertaken a programme of enquiry into the causes of failures in mathematics so that remedies may be suggested. Diagnostic tests suggested by Dr Schonell are being demonstrated to the pupils of the Gauhati University Model School and the necessary remedial measures will be taken later. Headmasters of 33 secondary schools are co-operating in a plan for reforming the examination methods. The Co-ordinator visited 4 schools during this period.

The Co-ordinator of the *Department of Extension Services, Santiniketan*, arranged a series of demonstration lessons at Vinaya Bhavana. The Department organized two week-end seminars on the teaching and evaluation of Bengali and general science. The subjects discussed in the first were the reorientation of teachers' outlook and approach to the teaching of Bengali as the first thing, and the principle of inculcating independent reading habits among students. In the second, it was stressed that the teaching of science should help

students to develop a scientific way of thinking and acting, in addition to acquiring the scientific facts and principles. At a one-day seminar at Bolepur High School, improved methods of teaching and test and the organization of hobby clubs were discussed. The Department organized a seminar of headmasters under the guidance of Shri K. P. Choudhry, Director of the Bureau of Education and Psychological Research, West Bengal. The programme included a parents-teachers meeting. A poster-exhibition on guidance and counselling and two symposia—one on the maintenance of cumulative school records and the other on the problems of secondary schools were held. The Department also arranged two week-end seminars, one on problems, teaching and evaluation on methods and the other on the school beautification. A meeting of the Advisory Committee of the Department was held at which the Co-ordinator reported the steps taken by him for intensive follow-up work. The Committee approved a programme of 4 seminars to be held during the vacation. It was also decided to organise an education fare at Vinaya Bhavana on the occasion of the centenary celebrations of Rabindra Nath Tagore's birthday. The Co-ordinator visited a number of schools in connection with the follow-up programme and with matters relating to practical work in the teaching of geography.

The Co-ordinator of the *Department of Extension Services, Institute of Education for Women, Calcutta,* helped the Bengali Women's League in the organization of its training course. She also acted as a resource person in the seminar organized by the League on student indiscipline. The Department has started weekly evening classes on phonetics and spoken English in Baliganj area for local teachers. The course will continue till the end of the year. 3 local schools co-operated for demonstrations in the teaching of English and the social studies The Department is preparing a number of charts with small pictures from old magazines and newspapers. A set of pictures and reading materials have been prepared for use in the structural approach to the teaching of English The Co-ordinator visited 19 schools during the period under report in connection with advisory and guidance services.

The part-time music course started in June by the *Department of Extension Services, David Hare Training College, Calcutta* was completed. The participants were also trained in the signing of a few community songs which would be useful in the school programmes. At a meeting of the teachers of social studies, modern techniques of evaluation were explained and a talk on the improvement of learning situations in the class room was given. Another meeting of the study circle of the teachers of Bengali was held to finalize a report on the critical study of the existing syllabus in Bengali. The Department also organised evaluation workshops in Bengali and methods for the local teachers who discussed the construction of text. A meeting of the science teachers association was convened to examine the existing syllabus in general science of classes VIII, IX and X of the secondary schools. A conference of headmasters of all secondary schools of Calcutta was arranged to discuss the problems of different

schools. Suggestions were made that the Extension Services Department should organize a few more intensive courses on some elective subjects, particularly for science and psychology, in which there was a dearth of teachers in the schools. The Co-ordinator visited a number of schools in connection with the follow-up work of the English and history courses and addressed 200 teachers of secondary schools at a meeting organized by the Bengali Women's Education League on "Audio-Visual Aids to Teaching in Schools." The Co-ordinator of *Department of Extension Services, Cuttack,* visited 3 schools in the rural area to discuss methods of improving the teaching in different subjects and six other schools to advise the staff in day-to-day problems and to encourage them to take up small projects. He inspected science clubs in two schools and gave demonstration lessons in arithmetic and social studies in high school classes. The Extension Library issued 50 books to the schools during the period under report.

The Department of Extension Services, Bhagalpur, arranged 3 courses-cum-demonstration lessons in English at Bhagalpur, Deoghar and Monghyr. A demonstration on English idioms was arranged. About 40 teachers attended each course. At Monghyr, the Department also convened a meeting of sponsors of science clubs of Bhagalpur division It decided to carry out some common activities of educational value. There were meetings of study circles at Deoghar and Monghyr. In one, the subject of discussion was "How to Develop Reading Habits among the Students"; in the second, a talk was given on the "Aims of Teaching Science"; the third was addressed by the District Inspector of Schools, Bhagalpur. A five-day in-service course on school broadcast was conducted by the Department for the teachers of Bhagalpur division. They also listened to selected broadcasts. The Co-ordinator visited 11 schools in connection with the follow-up and other activities.

Under the auspices of the *Department of Extension Services, Turki,* Shri B. Ranjan, conducted a course on the structural approach in the teaching of English, which was attended by 25 teachers of senior basic schools. Another course on evaluation in secondary schools, organised by the Department at the multipurpose school, Siwan, was attended by 37 teachers who discussed the brochure on evaluation published by the D.E.P.S.E. The Co-ordinator organized a conference of teachers and headmasters of Gopalganj schools and discussed with them the teaching of craft in schools. The Department also arranged a meeting of Hindi teachers under the auspices of the Hindi study circle of Sonepur. Shri A. H. Hemrajani, Field Adviser, D.E.P.S.E., visited the Department and saw the working of the Multipurpose schools at Pusa, Muzafarpur and Darbhanga. The Co-ordinator visited five schools in connection with guidance services. During this period 157 books were loaned from the Extension Library.

Central Zone

The Department of Extension Services, Poona, organised a follow-up course on "Utilisation of Vocational Guidance Period in Standard

X" and was attended by 61 career masters from the secondary schools of Poona. A special feature of this course was a demonstration lesson given by Shri Pimpalkhare, Assistant Vocational Guidance Officer, Poona, on "Careers in Defence Services". The Department also organised three workshops for the teachers of English Standard V and VIII. Since the Government of Maharashtra has introduced the teaching of English in Standard V from June last, these workshops were designed to provide necessary guidance to the new teachers. The Co-ordinator visited 11 schools and discussed ways and means in which the Extension Services Department could help the schools. The Department organised a workshop of teachers of Marathi, working in Poona, Ahmednagar, and North Satara Districts. The participants of the workshop discussed the new rules of Marathi orthography. The Department loaned books to 9 schools in the area and arranged film-shows for the participants. The audio-visual services of the Department functioned as usual.

The Co-ordinator of the Department of Extension Services, Ahmedabad, visited seven schools in connection with a programme of discussions, demonstration lessons, projects and science clubs. He also arranged for the members of the English Club a programme of listening to records and tape-recordings with the help of the A.I.R. Ahmedabad. The new Gujerat State has entrusted the project of evaluating the intensified programme of teaching English in the State to the A.G. Teachers' College. The Co-ordinator helped the members of the staff of the college in preparing achievement tests and in administering them in different schools. Two educational exhibitions were arranged by the Department in mofussil schools. The Co-ordinator helped to organise a workshop on "Individual Assessment in Schools" at C. N. Vidyalaya, Kapadgunj. The Department also arranged a workshop on the teaching of English at Modasa, Sabarkanta district for the district school teachers. The new approach to the teaching of the subject, illustrations of a few structures and the place of text-books were discussed. At a meeting of the Advisory Committee of the Department, it was decided that a few behavioural problems may be taken up for investigation on action research level.

The Extension Services Department, Bombay, along with the English Teachers' Association, Bombay, organised a demonstration lesson in English to the pupils of Standard V at the Ram Mohan English School, Bombay, which was given by Dr. J. A. Moonan of the Institute of Education, London. This was followed by a talk on general problems involved in the teaching of English. The Department also arranged four one-day seminars on:—(1) Problems related to the teaching of general science. Forty-nine teachers from different schools participated and discussed the problems. (2) Improvement in the teaching of Hindi in secondary schools. Forty-one Hindi teachers participated and discussed on the teaching of grammar, rapid reading, script and composition etc. (3) The teaching of history. Fifty teachers attended and discussed the changed outlook in the selection of historical subject matter in the light of teaching objectives and

the need and use of various teaching aids. (4) The teaching of English. A 4-day seminar on the teaching of English was arranged by the Department with the collaboration of the Nasik Secondary Teachers' Association. Mr. D. H. Spencer of the British Council and Shri S. V. Sohoni of Bal Mohan Vidya Mandir guided the deliberations of the seminar. The Department conducted a workshop on Evaluation in Educational Research sponsored by the Directorate Prof. T K.N. Menon inaugurated the workshop which was held under the guidance of Dr Fletcher. T.C.M. Consultant and was attended by 23 participants from Gujerat and Maharashtra States. The Department also arranged a 5-day drawing teachers' course. conducted by Shri J. Mistry. a commercial artist.

The Extension Services Department, Kolhapur. has established 16 Extension Outposts in three districts under its jurisdiction in order to facilitate its programme of intensive and follow-up work with schools. An evaluation workshop in mathematics was organised at Gandhiglaj for the mathematics teachers working in 11 schools in the area. A second workshop was arranged at Islampur in South Satara District. and was attended by 30 teachers from 16 schools. The Department also arranged a seminar on the teaching of English for teachers of Kolhapur district. Twenty-nine teachers who attended the seminar were given ample listening practice through linguaphone records and the tape-recorder. Demonstration lessons were also arranged. As many as 22 films were screened.

The Department of Extension Services, Nagpur, arranged a meeting of headmasters of local schools Fourteen headmasters participated and discussed the improvement in the teaching of English and the new approach to the teaching of the mother tongue. Another meeting of the headmasters was arranged to discuss the problems of internal assessment. Nineteen heads attended the meeting and discussed the improvements which could be effected in the present methods A lecture-cum-discussion meeting was also organised for the teachers of English in the lower-classes.

The Department of Extension Services, Baroda, organised a seminar-cum-workshop for 36 teachers of local schools. Prof. Lee of the University of London, Dr. M. S. Patek and Dr. D. M. Desai of the Faculty of Education guided the discussions Prof. Lee and Dr. Patel gave demonstration lessons. Dr. D. M. Desai conducted the evaluation workshop in English The Co-ordinator visited a number of local schools at which problems of internal assessment were discussed. The Department loaned 23 films and 34 film-strips to six schools.

The Co-ordinator of the Department of Extension Services, Osmania University, Hyderabad. conducted a 4-day course in English for the benefit of 61 teachers of the South Block schools. He also visited eight schools in connection with the discussion on the 10-point programme drawn up at an earlier seminar. The Department arranged (1) An exhibition of books; (2) a 4-day seminar on the structural approach in the teaching of English attended by 51 teachers;

(3) a social studies seminar to discuss the content of the course and the source material for the teaching of the subjects; (4) a workshop on assessment of pupils' traits for 6 days where 42 participants discussed the cumulative record card system. (5) 3-day workshop for teachers of secondary schools to discuss the following subjects. staff study circles, organisation of the syllabi into meaningful units, working projects, preparation of teaching aids with the help of children, etc.

The Co-ordinator of the Department of Extension Services. Rajahmundry, paid visits to thirteen schools in his area in connection with follow-up activities arising out of the English seminar held at Draksharama and problems relating to cumulative record cards, school library service etc. The Department organised a 4-day course in geography, attended by 24 teachers of East Godavari district. In addition, a short course in educational measurement was arranged by the Department for the science teachers of local schools The Department organised (1) a seminar on learning experiences in mathematics; (2) a seminar on the structural method of teaching English for lower classes and (3) a seminar on the fundamental concepts in physics Books and charts and other visual aids were loaned to these schools to enable them to make their teaching more effective

The Extension Services Department. Warangal, has established under its guidance the central science club at the Training College. In a meeting of the club the aims and objectives of science clubs were discussed. along with the organisational pattern. the nature of activities and other problems concerning science clubs. The Co-ordinator of the Department gave a demonstration lesson in social studies at the Government Multipurpose High School. Hanamkonda which was attended by 60 trainees and 10 teachers of the local shcools followed by a general discussion. The Department also arranged a 7-day seminar for headmasters of High Schools at Nagarjunasagar High School. The participants discussed among other the following topics:

(1) Problems of class-room teaching.

(2) Associating Schools in a locality for certain specific educational purposes and tasks.

(3) Assessment and Evaluation and the role of the Headmaster.

(4) Student Indiscipline.

The participants were provided with reference books from the Library of the Department and saw six educational films and an exhibition of audio-visual aids. organised by the Department. On the occasion of the seminar, Shri T. N. Ramachandran, Retired Director General of Archaeology, Government of India, gave an interesting talk on the historical, cultural. and educational importance of Vijaypuri. otherwise known as Nagarjunasagar Four films were screened and six schools visited by the Honorary Director and Co-ordinator.

Southern Zone

The Co-ordinator of the Department of Extension Services, Kozhikode, visited 11 schools in connection with library services and discussed with the members of the staff the possibility of starting study circles. The intensive course in the teaching of English in Standards V and VIII concluded. During the period, a demonstration lesson was arranged at Zamorin's College High School. On the last day, the Honorary Director addressed the combined group meeting stressing the need of follow-up work. There was also a "Shadow Puppet" demonstration of an English poem by the VIII Standard group. The Department arranged a special conference of select drawing and craft teachers to discuss the making of puppets. A course on the structural method of teaching English was conducted by Mrs. Chandran, a retired headmistress, under the guidance of the Department. Thirty-three books were issued from the Extension Library and necessary guidance and material were given to St. Joseph's Boys' High School, Kozhikode for the conduct of their science exhibition.

The Co-ordinator of the Department of Extension Services, Trivandrum, visited four schools in the city for library services. He also visited S D.V. High School, Alleppy and inaugurated the science club of the school. The Co-ordinator paid visits to three other training colleges in his area to enlist the support for Extension work.

The Extension Services Department, Trichur, re-started the activities of the Central Science Club attached to it. The project on the assignment method in the teaching of mathematics was continued in the Model High School for Boys, Trichur. At the C. A. High School, Ayapad, the Department is encouraging an experimental project in social studies. Four more schools have decided to start projects on the teaching of mathematics by the assignment method, school dramatics, improvement of school and class libraries and the school beautiful. The Co-ordinator visited three science clubs to discuss the programme of their activities with the headmasters and staff of the schools.

The Department of Extension Services, Mangalore, organised two week-end courses in English at Udipi and Puttur High Schools. Demonstration lessons in teaching English prose and poetry were given by experienced teachers. The problems of covering the prescribed texts, providing for individual differences etc., were also discussed. The Co-ordinator visited six high schools and discussed with the teachers the finalised syllabus of Standard IX and how best it could be implemented during the next academic year. The Central Science Club attached to the Department met regularly on Saturday afternoons. Talks on lives of scientists, latest scientific developments and demonstrations of scientific principles through improvised apparatus prepared by the members were given at these meetings.

The Department of Extension Services, Mysore, arranged two week-end courses, the first one at T. Narsipur, was attended by 56 mofussil

teachers and 50 teachers from local multipurpose High Schools. Two demonstration lessons—one in science on "Chlorine" and the other in social studies on "Effect of Geographical Factors on Man"—were given during the course The general problems of multipurpose high schools were also discussed. The Second course was held at Holenarsipur, where lessons in English and mathematics were given. A seminar on improving school administration was also arranged. The Department conducted another week-end course. There were two more demonstration lessons followed by discussions. Shri K. Rama Rao gave a lesson on optics, in science, fully illustrated with experiments. The second lesson was in social studies given by Shri Vijayajanda Sadhu on the "Effect of Tropical Desert Environment on Man." The course was attended by 25 teachers of mofussil high schools and 21 teachers of local high schools. The participants discussed the question of conducting small projects in schools. The group listened to some of the experiments tried in different schools and made various suggestions. They also saw six films. Two-hundred and forty-eight books from the Extension Library were issued and film shows were arranged at three places.

The Department of Extension Service, Meston Training College, Madras, has been experimenting for some months past for the improvement of teaching English by the introduction of group activity procedures. Fourteen high schools in the North Arcot District have introduced these methods A conference of the headmasters and English teachers of some of these schools was held at the District Board High Schools, Arni, Dr. (Miss) J. F. Forrester and Mr. C. M. Fazalur Rahman guided the deliberations of the conference. Demonstration lessons were given and discussions were held on the following topics: —

(1) When the group is engaged in answering the assignment, how can backward pupils be helped to participate?

(2) What can we do to prevent one or two clever pupils monopolishing during group discussions?

(3) Is it possible to cover the syllabus in the time under group activity procedures?

(4) Can we introduce the procedure in Form VI?

The Department of Extension Services, Annamalainagar, extended the programme of intensive work to the schools at Kothandapuram. The Co-ordinator held discussions with the heads of schools regarding the implementation of the programme. A 5-day seminar on the teaching of English was conducted by Dr. G. S. Nutley, Visiting Fulbright Professor of English and Mr. J. P. B. Shepherd of the British Council. They gave two model lessons in the teaching of English. Different aspects of teaching English were also discussed at the seminar. Dr. G. S. Nutley conducted another one-day English seminar at the special request of the teachers of Shiyali schools. Over 90 teachers participated. The Department also arranged a 4-day seminar on the teaching

of mathematics. The Central Science Club began its activities with a lecture by Prof. T. N. Muthuswamy Iyer, Head of the Department of Geology on "Earth and its Origin".

The Department of Extension Services, Coimbatore, conducted a 3-day workshop in science, participated by 28 graduate trained teachers of 16 local/high schools of Coimbatore. The syllabus issued by the Department of Education was critically studied. It was also decided to start a Science Teachers' Association in Coimbatore. The Department also organised a seminar on the teaching of Indian languages, namely—Tamil, Sanskrit and Hindi in which the aims and objectives of teaching, syllabus and evaluation methods were discussed. The Co-ordinator visited a number of schools in connection with guidance and Advisory Services.

The Department of Extension Services, Madurai, organised a 3-day course in teaching mathematics, in which learning situations and experiences, field and class work, teaching of riders and experimental geometry and leisure-time enjoyment were discussed. The Co-ordinator gave a demonstration lesson on the occasion on the use of audio-visual aids in the teaching of mathematics. The Department also organised a 3-day course in the teaching of English at the M.D.T. Hindu College School, attended by 26 teachers from the districts of Kanyakumari and Tirunelveli. The course included talks on methodology and the structural approach in the teaching of English. At the request of several schools, the Co-ordinator gave demonstrations on various types of science club activities and gave suggestions regarding organisation of science clubs. Seven films were screened.

The Department of Extension Services, St. Christopher's Training College, Vepery, Madras, held a 4-day leaders' camp for middle and high schools doing citizenship work at Avadi. The Department is working on a project for improving the teaching of English at St. Anne's High School. Miss Peyer, Lecturer in English of the Training College and Miss Vedanayagam, the Co-ordinator, met the English teachers of the school and suggested methods for dealing with backward children. They arranged for a demonstration of diagnostic and spelling tests to three sections of Standard VIII. They met the teachers of St. Anne's High School once again to guide the project work in English for Standard VIII. Miss Vajreswari, Lecturer in Social Studies of the Training College, had a preliminary discussion with the teachers of social studies at the Northwick Girls' High School in order to start a work project in that school. The study of Mysore State was the unit finally selected for the project. The torso-model and several maps and charts were loaned to K. C. Sankaralinga High School. Some films were also screened for the benefit of the teacher-trainees of the college.

The Department of Extension Services, Bangalore, in collaboration with the State Department of Education, arranged two 3-day training courses-cum-workshops in the maintenance and use of cumulative records cards at Bangalore and Tumkur. These courses

were attended by 37 and 28 teachers respectively. Various aspects of cumulative record cards such as its importance, contents, definition of terms used in the cards, personality statement and statistical interpretation of the data were dealt with during the course. The participants also filled in two cards by actually interviewing the pupils. The Department participated in a seminar on *higher secondary education arranged by the Teachers' Association* of Gandhinagar, Bangalore. The purpose of the seminar was to evolve a common pattern of approach and to get a clearer picture of the contents of the subjects of study introduced in the new syllabus for Standard VIII. The Co-ordinator visited seven schools and held discussions with the staff of the schools regarding the activities of the Department. An audio-visual aid exhibition was arranged at Tumkur in which the United States Information Service, Bangalore, also participated.

Extension Highlights

The Department of Extension Services, Meston Training College, Madras, is encouraging schools to organise their own broadcasting *programmes. Most of the high school now possess audio-visual* equipment such as amplifiers, microphone and loud-speakers and if this equipment is used intelligently it will be possible for every school to develop its own broadcasting programme. Each class of the school is guided to prepare a programme of about 45 minutes' duration. This consists of vocal and instrumental music, reading of prepared talks, dramas, dialogues, recitations, news summaries, announcements and short talks by visitors and specialists invited for this purpose. At the appropriate time, the performers go into the headmaster's office room which serves as the broadcasting station. As every class gets its turn for putting up such programme, *there is healthy competition among the pupils and school life is* made more interesting and challenging for the pupils.

A Report from Lucknow

The following report from the *Extension Services Department, Isabella Thoburn College, Lucknow*, will be of interest to our readers.

> "We are using our film-strip projector and film-strips to help pupils acquire good study habits. Our film-strips, 'The Study Head Quarters', 'How to Read', 'How to take notes' and 'How to Review' help us greatly in bringing to the notice of our pupils the great need of studying more efficiently. In this connection, we have given the pupils a chance to express their views on their own habits of study and how they could be improved. The latter has, best, been done through skits, though discussion on this topic was also lively."

"Teachers are getting more conscious of the advantages of teaching aids. Sentence Structure diagrams have been put up for pupils' help and new vocabulary is being taught through illustrations instead of speech media only. In one situation the imagination of pupils has been stimulated to such an extent that every day home-work in English is being done through illustrations in which the parents are also showing much co-operation. Pupils are preparing bulletin board material independently and our report is that considerable progress has been made."

"We are still emphasizing pupil participation in class-work. How often we think that whatever a child produces ought to be a flawless show piece. We are trying to emphasise that we wish to teach creative thinking and therefore the emphasis is not on finished products or minute details, but on creative activities".

Publications

Name of the Institution	*Name of the Publication*
(1) Meerut College, Meerut.	A classified list of books in the Extension Library.
(2) B. R. College of Education, Agra.	A pamphlet on the teaching of English and sounds of the language.
(3) David Hare Training College, Calcutta.	A quarterly news letter (Publication No. 27).
(4) Central Institute of Education, Delhi.	Our Library—A Catalogue.
(5) Department of Extension Services, Mysore.	(1) A report on the career masters' course. (2) A report on evaluation in geography. (3) New type tests in various subjects.
(6) Teachers' Training College, Bhagalpur.	Newsletter of the Extension Services Department.
(7) R. N. Training College, Cuttack.	A report of the career masters' training course.
(8) A. G. Teachers' College, Ahmedabad.	"MENTOR"—September, 1960.
(9) St. Christopher's Training College, Vepery, Madras	(1) Newsletter. (2) Diagnostic tests in mathematics (A&B).

Educational and Vocational Guidance in Schools

N. C. S. Rao

In this article, Shri N. C. S. Rao, Director of the Vocational and Educational Bureau, Jabalpur, makes it clear that while all teachers are, in a sense, guidance workers, they cannot be effective unless their programme of guidance is carefully organized on scientific lines. He suggests, therefore what the content and scope of guidance education should be in secondary schools to make it an effective instrument of education. —*Editor*

Purpose, Activities and Organisation

Guidance has always been recognised as a function of secondary education. Good teachers in good schools have always provided guidance to a few pupils The essential quality of an able teacher is considered to be not only his scholarship and teaching skill but also his sympathetic interest in student's problems and his competence in handling them. When adults are asked to name the teachers who have influenced them most in their lives, it is often found that those teachers are mentioned who combine in themselves the qualities of a teacher with that of a counsellor. Thus even to-day there is guidance of a casual and incidental sort in our schools, but it is neither organised nor scientific What we need is an organised guidance programme as an integral function of the school.

Guidance and Education

Guidance is the process of assisting an individual through his own efforts to discover and develop his potentialities so as to achieve personal happiness and social usefulness. The aim of guidance is personality development, realisation of self and social adjustment. Thus there is much that is common between education and guidance in their objectives and purposes. This has led some educators to consider guidance as synonymous with education. In distinguishing the scope of guidance and education, A. J. Jones writes: "All guidance is education but some aspect of education are not guidance; their objectives are the same—the development of the individual—but the methods used in education are by no means the same as those used in guidance".[1] Guidance is an instrument of education; it is an aspect

[1] A. J. Jones: Principles of Guidance, P. 79.

of the educational process which is specifically concerned with helping the pupil become adjusted to the present situation and to plan his future in life with his abilities, interests and social needs.

Modern trends in guidance emphasize the view that guidance is not a specialised service which is added on to the curricular and cocurricular functions of the school but forms an inseparable part of the educative process. Thus all teachers are guidance workers. Guidance is a service which should be involved in any teaching situations. As Wrinkle and Gilchrist put it: "Teaching without intelligent guidance cannot be good teaching, and guidance without good teaching is incomplete. Teaching and guidance are inseparable".[1]

Although theoretically teaching and guidance are closely related, in actual practice we find it is teaching that is emphasized as a function of the school and not guidance. Variety of factors have contributed to the neglect of guidance in our schools; the heavy teaching load of teachers, the high teacher-pupil ratio, dearth of teachers who are inspired by guidance ideals and lack of acceptance of guidance by school administration as an essential function of education, are some of them.

Importance of Guidance

Now a new impetus is given to guidance and counselling service in the reorganised pattern of secondary education. With the establishment of Multipurpose schools providing for diversification of curriculum to suit the varied abilities and needs of pupils, educational guidance has assumed an added importance. Moreover, surveys of students' needs and problems in schools have indicated the following facts.

(a) The widespread discrepancy between students' school marks and scholastic aptitudes indicate the need for courses suited to varied levels of ability, for more effective individualised instruction and for adequate motivation in school work.

(b) There is evidence to show that there is lack of intelligent planning on the part of our boys in regard to their future educational and vocational career. As a result there is a tendency to drift from one educational course to the other or from one job to the other at the strategic points when decisions have to be made.

(c) The wide range of personality and behaviour problems prevalent in schools, the high percentage of school failures, the problem of wastage and stagnation—all focus our attention on the need for introduction of guidance and counselling services.

As a result of the realisation of the crucial role of guidance in educational reconstruction of the country, important steps have been taken by the Government of India in recent years. Guidance Bureaus have been established in the Centre as well as in many States. Guidance organisation at the school level is gradually taking shape.

[1] Wrinkle and Gilchrist. Secondary Education for American Democracy, P. 334.

The guidance service as envisaged here is a co-operative effort of the whole school to which the teachers, the school counsellor and the headmaster contribute severally.

Guidance Activities and Programmes in School

The main activities and functions of guidance in school can be described as follows:—

(1) Maintenance of the cumulative record folder for each pupil containing information on pupil's home background, his physical history, his school record, his scores on intelligence and achievement tests, the trait ratings assigned to him by his teachers and reports of teachers concerning his scholastic progress. Such cumulative record cards are maintained for each pupil from class VI to XI. Collection of such information is basic to guidance.

(2) General, educational and vocational orientation of pupils of VI, VIII and XI classes in the high school. The main purpose of orientation is to build up desirable attitudes to school work, widen the occupational horizon and stimulate interest in educational and vocational planning.

(3) Compilation, organisation and dissemination of educational and vocational training information.

(4) Group discussions on common problems about which pupils are concerned such as study habits, motivation in learning, adjustment problems of adolescents and so on. Such a discussion frequently enables a pupil to see his problem in truer perspective, crystallise his own thinking about the problem and thus become able to move intelligently against it.

(5) Providing assistance to the pupil in the choice of diversified courses at the end of the VIII class in the High School.

(6) Assistance in organising a programme of co-curricular activities with a view to providing opportunities for exploration of interests and the development of leadership qualities on the part of students.

(7) Conducting counselling interviews of all children who volunteer for them.

(8) Arranging career talks by experts on important groups of occupations in line with the expressed interests of children in the class.

(9) Organising a career conference once a year so as to bring employers, pupils, parents and teachers on a common platform for discussing certain vocations and careers.

(10) Undertaking case studies of problem children or retarded children with a view to adopting remedial measures of treatment.

(11) Evaluation and follow-up of guidance procedures for determining their effectiveness.

(12) Obtaining the co-operation of various agencies and persons connected with Guidance such as Youth Employment Service, the parents and teachers through the functioning of school guidance committee.

Requisites of Guidance Programme in School

In order to develop and organise guidance programmes outlined above, there are at least four pre-requisites:

1. Educational and vocational guidance should be accepted as an essential function of secondary education by school administrations. They should be convinced of its utility for promoting personality growth of pupils. Such a conviction can come only as a result of demonstrating the values and outcomes of pilot guidance projects introduced in selected schools. Proper orientation of Headmasters to the possibilities of guidance would also prove helpful in securing better appreciation and acceptance of its role in modern schools.

2. Secondly, leadership by a professionally trained guidance worker is important. In order guidance may succeed, there should be a member on the staff of the school, who is professionally trained in guidance and counselling. It is his function to co-ordinate the efforts of several teachers in the school in the collection of pupil data, to initiate group guidance procedures and to do individual counselling. In the absence of a properly trained school counsellor who could provide leadership to the programme and also offer counselling service of a specialised nature, the chances are slight that guidance will progress steadily and grow strong. As Jane Warters puts it: "If the services of a trained counsellor are not available, much that may be done in the name of guidance may be of limited value or even useless; and some of it may prove harmful to the recipients".

3. The third requirement is the active co-operation of a band of teachers who are interested in guidance. The counsellor does not do the work alone; he obtains the assistance of teachers in the implementation of guidance activities. Teachers contribute to the guidance programme by supplying data for cumulative record card, by identifying the children with problem tendencies, and also by assisting the counsellor in many other ways.

4. Lastly, scientific guidance requires the use of aptitude tests and related measures of pupil appraisal. Psychology Departments in the Universities and Training Colleges and Bureaus of Educational and Vocational Guidance are trying to meet the demand by constructing and standardising

[1] Jane Warters · Techniques of Counselling, P. 3.

tests; still much remains to be done in this field. Similarly, occupational information material, films and filmstrips on vocations and other related audio-visual aids are needed for schools. At present, however, occupational information is made available to schools in the form of "Guides to Careers" prepared by D.G.R. & E., Ministry of Labour. If this information is supplemented by job and training information of local import, it would go a long way in meeting the needs of guidance.

Thus it can be seen that in order to organise and develop guidance service as a function of secondary education the following measures are to be adopted:—

(1) Headmasters and Inspecting Officers are to be reoriented to modern developments in guidance practices and their relation to curricular and cocurricular activities of the school.

(2) Priority should be given to Guidance personnel training programmes by the State Bureaus of Guidance. There should be provision for training guidance workers of different levels of professional competence such as school counsellors, teacher-counsellors and career masters for operating guidance services in schools.

(3) Orientation courses, seminars and workshops in guidance should be organised for as many teachers as possible with a view to enabling them to appreciate the vital role of teachers in guidance programme.

(4) Efforts should be concentrated on the production of aptitude tests and other guidance tools to serve as scientific basis for guidance.

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Jane Warters: Techniques of Counselling.

Little & Chapman: Developmental Guidance in Secondary School.

An Investigation into the Content of Attitude of Guidance Workers towards the Guidance Movement

R. M. Verma

The success of any plan depends upon the enthusiasm and attitude shown towards it by the people who have to implement it. Below is given an investigation into the attitude of guidance workers in Bihar, which was undertaken before May. 1959, in respect of 40 teacher-counsellors working in different parts of the State. The report, by Shri R. M. Verma, who is the Counsellor of the Educational and Vocational Guidance Bureau, Bihar, throws an interesting light on some of the difficulties experienced in the implementation of the State programme of guidance in secondary schools. —*Aditor*

The role of opinion and attitude survey can hardly be underestimated in judging as well as in re-enforcing the effectiveness of any movement or plan. In the present formative phase of educational and vocational guidance within the educational reconstruction programme, the probe into the mental make-up of workers towards their new responsibility assumes paramount importance. There is a multitude of evidence which supports this contention that the success of any new enterprise depends on the opinion and attitude of its personnel towards the enterprise itself. That is the reason which has stimulated the widespread use of opinion and attitude studies in community planning, governmental administration, economic analysis, public relations and labour relations, etc.

The interest of the investigators has been directed to several dimensions of attitude-study, ranging from its kind and content to its direction, intensity and saliency, etc. But the aims of all these researches converge upon the understanding and change of such cognitive patterns.

The present enquiry is an investigation into the content of attitude: an investigation which was deemed expedient at this stage of the guidance movement in the State of Bihar.

Method

A set of six questions was drawn upon the effectiveness of the guidance programme at the hands of guidance workers in the state. The questions were in direct form and were judged by ten persons as relevant to the attitude study. Respondents were required to give sincere and truthful replies to the questions. Their co-operation was expected as they had developed a very happy relationship with the investigator who mixed with them and participated in the course while they were receiving training in educational and vocational guidance. The data for this investigation were collected before May 1959. They were further requested not to mention their names and whereabouts on the reply forms in order to avoid the disclosure of their identies and to make them feel that their reports were considered confidential. The same set of questions was sent concurrently to different workers in the field. The questionnaire was accompanied by a letter from the investigator requesting the worker to co-operate and to send the replies within a week's time.

Sample

Forty teacher-counsellors who are operating this educational and vocational guidance programme in secondary schools, were selected to be tapped for this investigation. Efforts were made to see that the sample was representative of all areas in the state. Out of forty such workers who were on the mailing list, thirty responded.

Results

The introspective reports of the respondents on each question were analysed. Further, the statements made by them were collated and the percentage of agreement on them was worked out. There were many responses, but only those which had at least 10 per cent of agreement among respondents were considered in this study. Questions with summarised answers are presented below:

Q. 1. *What is your opinion regarding the future of guidance services? What are the handicaps, according to you, in the right implementation of this service?*

Summary statements:—

A.	The future of guidance service is bright beyond doubt provided necessary conditions are created.	52.29%
B.	It has not been properly considered by Government; Government is half-hearted; the Government of India is alive to the need but the State Government does not appear to be keen; the State Bureau is not effective.	60%
C.	The absence of special remuneration to teachers operating this programme is a drawback.	70%

D. The teacher-counsellors need to be exclusively spared for guidance work. The number of students in class VIII is large enough to be managed by a full-time guidance person. Teachers are overburdened; and some are hardly sincere in their work. 55%

E. Sympathetic sharing and co-operation by other members of the School staff in this programme will remain a theory. 25%

F. School authorities are conservative and resistant to change. It is hard to make them change and depart from the traditional lines—they require compulsion from Government to take up anything along these lines 35%

G. Since teachers are not willing to join this training of educational and vocational guidance, they are forced to do so by the authorities. Therefore the right personnel is not selected. 25%

H. Public opinion is yet to be educated—Parents and guardians may not agree with the recommendation of teacher counsellors and so all efforts may turn out to be futile. 25%

Q. 2.—*Supposing you are made the responsible person for effecting this guidance programme with absolute powers, what concrete suggestions you would make for?*

Summary statements:—

A. Teacher counsellors should be completely exempted from teaching work. 20%

B. Number of teaching hours should be lessened to enable Teacher-Counsellor to do this work. 20%

C. Monthly recurring contingent grant to be sanctioned—Govt. grant should be given to schools for necessary equipments etc. 50%

D. The work of the Teacher-Counsellor should be remunerated. 45%

E. Regular supervision and inspection of the work of the teacher counsellor should be done by the staff of the State Bureau and not by non-technical persons. 20%

F. Due regard should be paid by the Headmaster to the teacher counsellor. 25%

G. No secondary school should be given government recognition unless it provides guidance services and facilities to teacher counsellors. 20%

H. Institutions doing good guidance work should be given rewards. 10%

I. Distinguished guidance workers should be given rewards. 10%

Q. 3.—*What do you know of your neighbouring school where the teacher counsellor is operating this programme? Do you think he has made any real progress? What are, in your opinion, the shortcomings in him or in the authorities responsible for the effectiveness of this programme?*

Summary statements:—

A.	The counsellors are doing nothing because they are not allowed proper working conditions.	35%
B.	No definite answer can be given about them.	60%
C.	They are not true to their profession and have no zeal and interest in the work	20%

Q 4.—*How do the school authorities react to this proposal of guidance?*

Summary statements:—

A.	Enlightened people appreciate the programme but the rest think it unnecessary.	15%
B.	The Headmaster welcomes the proposal but does not have faith in its workability.	10%
C.	Members of the Governing Body express satisfaction with this but the Headmaster is not enthusiastic about it.	10%
D.	The School authorities are not ready to part with the services of competent teachers.	20%
E.	The School authorities do not want to spend a single pie on this programme and await aids from the Government.	100%

Q. 5.—*What is your idea about training in educational and vocational guidance? Would you like to suggest anything in that regard?*

Summary statements:—

A.	The training is quite satisfactory.	90%
B.	The problem of boarding and lodging of the teacher counsellor under training must be solved.	50%

Q. 6.—*Mention some of the facts that have not come under previous categories, and which you deem necessary for such work.*

A.	In every district there should be an organisation of teacher counsellors for exchanging mutual experiences and tackling local problems.	15%
B.	The teacher counsellors should be made whole-time workers as counsellors.	10%
C.	The selection of teachers for the training must be revised. It is not happy at present.	20%

Discussion

The data collected in this investigation are highly revealing. Overall summary statements that are given in the form of responses to the question, suggest the deficiencies in the effectiveness of the guidance programme in secondary schools in this State. One important reflection that the entire content makes clear is the unfavourable direction of attitude and opinion among the workers towards the scheme which the state has sponsored. From the responses to Q. 1, we may conclude that as far as the future of the guidance movement in this State is concerned, it has bright prospects since the percentage of agreement is among respondents 52.29. Economic incentive is viewed by the workers as one of the vital points in the effectiveness of the programme, as stated in 70 per cent of the responses.

The workers in the field feel that the Government is not enthusiastic, in the implementation of this programme. It is not a 'must' for the State Government. This belief is supported by 60 per cent of the respondents. This feeling of workers seems to reflect the weakness of the administrative machinery. Whether it is a fact or not, steps should be taken by the educational authorities to wipe out this impression among them.

Another problem that is raised in their responses is intrinsically connected with the teaching load in our secondary schools. The bulk of work shouldered by individual teachers in the school is so heavy that to find time for doing this type of part service seems impracticable. Part time workers in this field will not be effective. Opinion is in favour of employing full-time guidance workers in place of part-timers. The percentage of agreement on this point is 55.

Conclusion

The contents of the responses reveal discontentment on the part of guidance workers in the State who are entrusted with this responsibility for the guidance movement. The handicaps suggested by them are real, not imaginary. Authorities responsible for effecting this programme should consider the points raised by them in their responses and should create healthy conditions to overcome these defects. To bring about change in their attitude, it is desirable to attend to the needs and demands of the individual worker in the field, or in other words, to the content of attitude and opinion of the guidance worker.

School Guidance Services in the United States

John G. Odgers

Mr. John G. Odgers is a member of the Ohio State University Education Faculty in India and is a Consultant in Guidance, attached to the D.E.P.S.E. Mr. Odgers describes the variety of tests that have been developed in the United States for use in schools, and how and with what purpose they are administered. He emphasizes the important role played by the U.S. Employment service in the development of occupational information materials, which has led to close working relationships between the public schools and the public employment service at all levels. The nature and types of counselling and the school guidance programme with reference to the State of Ohio, and the role of the State and the Federal Government in developing guidance work in schools, are explained briefly in this schools. —*Editor*

Near the end of the first decade of the present century, a limited number of educators and youth workers began to give active voice to one of the major problems facing young people of that time, namely that of making and carrying out educational and vocational plans which were realistic in terms of personal qualifications and existing vocational opportunities. Following the lead of Frank Parsons in Boston, Massachusetts early in the second decade, schools in widely scattered areas throughout the country began giving attention to the development of organized school guidance programmes. In the spring of 1963, the National Vocational Guidance Association will celebrate its 50th anniversary by holding its annual conference in Boston, which is generally accepted as the birthplace of the guidance movement in the United States.

During the fifty years since the beginning of organized school guidance services in the United States, the greatest contributions to the refinement of guidance practices have probably come from the developments achieved in the three major aspects of the guidance process. These include (1) the development of testing techniques; (2) the development of adequate occupational information; and (3) refinements in counselling psychology. Each of these developments might well become the subject of a detailed article. Only a brief summary of their growth and status will be discussed herein.

The Development of Testing Techniques

The use of group tests for the measurement of the characteristics of individuals and groups became significant in the guidance movement as a result of the major developments in the field of group intelligence testing during World War I. Since that time, there has been a steady growth in the development of tests, with an additional period of rapid growth during and immediately following World War II.

The competent counsellor finds it necessary to draw on many sources for information on the various aspects of growth and adjustment of the persons he is counselling. Test results represent one of these sources of information which can contribute significantly, provided tests are wisely selected, carefully administered, and interpreted in proper relationship with all other pupil information.

The good school testing programme must be three-dimensional. It must have (1) length: include the testing of certain basic factors on two or more occasions over a period of time; (2) breadth: include the measurement of various traits or characteristics so that one test can be interpreted in the light of other test results as well as non-test data; and (3) depth: include provision for individual or clinical testing to supplement the group testing programme whenever necessary.

Most of the tests used by schools in the United States fall into one of the following categories:

School Ability Tests: These are frequently called tests of intelligence, mental maturity, or mental ability. Basically, they describe the abilities of an individual in relation to his ability to succeed in school subjects. Research studies indicate that intelligence may have a basic component plus varying amounts of special factors such as linguistic ability and verbal reasoning, quantitative or numerical ability, form visualization or spatial relationship, perceptual speed, and co-ordination and dexterity. The trend in the United States is toward the use of factor type tests which show variations among the abilities of an individual rather than giving just a single or global score.

Achievement Tests. Whereas school ability tests describe the level one can expect a student to attain, achievement tests represent the level he is attaining. Achievement tests have been developed to measure specific skills such as reading, vocabulary, language arts, arithmetic, and study skills. They also are widely used for the measurement of achievement of content in most subject matter areas.

Aptitude Tests. At the secondary school level, it is possible to use standardized aptitude tests to determine students' abilities to learn in areas not commonly measured by current intelligence tests. The latter are, of course, tests of scholastic aptitude. Among the commonly identified aptitudes are those sometimes included in the factor-type intelligence tests, including numerical, verbal, form perception, and spatial relations. Combinations of one or more of these with school ability and achievement tests are frequently used to predict

success in advanced training for fields such as law, engineering or nursing, in special fields such as art, music, clerical or sales, or in broad fields of work such as technical or mechanical.

Interest Inventories: While it is recognized that interests are relatively unstable until at least the higher secondary level, many schools conduct a group study of interest at the junior high school level as one means of encouraging students to develop educational and vocational plans. Both expressed and measured interests may suggest course choices and career fields which may prove worth considering, *provided they are in line with ability*. Care must be taken to insure that students or their parents do not confuse interest with aptitude.

Personal and Social Maturity Inventories: The area of personal adjustment is complex and not susceptible to easy measurement. Measurements of personality are often regarded as tests but more precisely they are rating scales, problem check lists, or sociometric devices. Common in this area is the problem check list, which does not isolate and name specific maladjustments but which does identify problem areas of concern to the student. Used in groups, this type of instrument has value in identifying problems of common concern which can be treated in a group setting. It is generally recommended in the United States that the use of "personality tests" be confined to counsellors or psychologists who have highly specialized training.

Scholarship Tests: There is a growing trend in the United States toward the use of tests, usually of the scholastic aptitude or achievement variety, as the basis for the granting of college scholarships to able students by colleges, industries, foundations, and other groups.

Readiness Tests: Although the concept of readiness can be applied to the early stages of any new learning, it most commonly is used in reference to maturation in skills and concepts basic to reading and number work at the primary level. Readiness tests are usually used in combination with other information to help the teacher or principal determine placement and grouping. They sample abilities closely related to school ability and achievement.

Although the school counsellor may be prone to feel that tests are of primary value as a guidance tool, it is obvious that they are of basic importance in such traditional situations as determining readiness, measuring achievement, and diagnosing learning difficulties. In addition to using them himself, the good school counsellor has a responsibility to help teachers make intelligent use of test results.

The Development of Adequate Occupational Information

The important role that the U.S. Employment Service has played in the development of occupational information materials has led to the growth of close working relationships between the public schools and the public employment service at local, state, and national levels. This co-operation in the field of occupational information and guidance has proven mutually valuable in programme development.

The qualified school counsellor is trained in the development of local occupational information, which is of two types, is important. These are (1) job information, or facts about what the worker does and the qualifications necessary to perform the job; and (2) labour market information, or facts about the job opportunities and trends in the field of work in question. The good school counsellor develops and maintains a file of up-to-date occupational information for use in his counselling and group guidance activities.

Refinements in Counselling Psychology

In 1951, a statement endorsed by the National Association of Secondary School Principles* defined counselling as follows:

"Counselling deals with individual students—their plans, choices and personal problems. It is a purposeful relationship between two people in which the counsellor uses skill and insight in helping the student, but in which both take an active part to the end that the *student* resolves a conflict, comes to a decision, or changes an attitude".

As is the case in most disciplines, there are various schools of thought with respect to counselling theory and practice, and much gray area between clearly identifiable theories. Although there had been a steady trend away from the prescriptive type of vocational counselling initiated by Parsons and other early leaders in the guidance movement, possibly the greatest impact on this approach was made by Dr. Carl R. Rogers in his formulation of the theory of non-directive or client-centered counselling. Although Dr. Rogers' proposals were refined primarily in a clinical counselling setting, he has contributed greatly to the evolution of the good school counsellor into one who might well be classified as an *eclectic.*

With apologies because of lack of available references for accurate documentation, it might help to clarify the major points of view regarding counselling theory and practice by making the following comparisons of the three more common approaches to counselling: non-directive or client centered, directive or problem *centered, and* eclectic. It should be noted that in actual practice, counsellors are *not* usually classified as adherents to one type of counselling or another. The following approaches are named and discussed separately primarily for ease of discussion. It is not so easy to classify individual counsellors, since each brings his own personality and point of view into his work.

Non-Directive Counselling is client centered, or permissive. The *rationale* is that a permissive relationship allows the client to gain an understanding of himself to a degree which enables him to take positive steps in the light of his new orientation. The *hypothesis* is that the individual has the capacity to deal with his own psychological situation. The *aim* is to perceive as sensitively and accurately as possible all of the perceptual field as it is being experienced by the

* National Association of Secondary School Principals, Bulletin of Volume 35, No. 175, January 1951, "Counselling and Guidance in the Secondary School", P. 9-10.

counsellee and to indicate to the counsellee the extent of this perception. The *focus* is the individual. The *counselling process* may include catharsis (counsellee seeks help), release (counsellee makes free expression), self-understanding (counsellee achieves self-insight), reoriented goals (counsellee formulates plans), action (counsellee decides on a plan), and/or termination (counsellee terminates counselling contact). *Post contact* is on counsellee initiative. The *counsellor role* is one of intent listening and accurate reflection of attitudes and feelings.

While this approach might well prove superior with counsellees whose problems are primarily of personal or psychological adjustment, one might question its applicability to the counselling situation wherein the counsellee is primarily seeking factual information as the basis for decision making.

Directive Counselling is problem centered or counsellor centered, active, or prescriptive. The *rationale* is that the learning of new adaptive patterns through maximum utilization of the intellectual resources of personality permits the solution of the client's problems. The *hypothesis* is that a trained expert is required to determine what is wrong and what to do about it, since the client, by coming for counselling has demonstrated his inability to deal with his problem. The *aim* is to make a diagnosis concerning the nature of the problem and to devise and institute suitable training or choice procedures for the solution of the problem. The *focus* is the problem. The *counselling process* includes analysis (data collection), synthesis (analysis and organization of data), diagnosis (identification of problem), prognosis (counsellor makes predictions, counsellee attempts to make decisions), counselling (counsellor and counsellee work together to bring about adjustment). The *post contact* is counsellor-initiated follow-up (interviews and/or referrals). The *counsellor role* is active but not unduly directive, as a resource person who makes decisions if the counsellee is unable.

While this approach might prove satisfactory with the counsellee who clearly seeks information and opinion or advice, one might question its value in helping some counsellees achieve self-insight and self-direction.

Eclectic Counselling adapts the approach to the needs of the situation. The *rationale* is that a purposeful, reciprocal relationship can exist between two people in which one, a trained counsellor, helps the other to change himself or his environment. The *hypothesis* is that each person has his own individual approach to life's problems, therefore infinite variations are permissible in stimulating the counsellee to solve his problems. The *aim* is to facilitate the process of achieving self-direction. The *focus* is the counsellee's problems and needs. The *counselling process* includes preparation (studying preciously known data), attentive listening, problem identification (with or without counsellee's help), creating self-understanding on the part of the counsellee, weighing possible solutions (together), encouraging counsellee to develop a plan of action (assisting if needed), referring for further service (if needed), and/or terminating (counsellor or

counsellee may terminate). *Post contact* is followed through (interview or referral). The *counsellor role* is permissive or directive as the case may warrant or at different times during the counselling interview.

The Development of School Guidance Services

As new tests and occupational information materials were developed over the years and as counselling theory and practice were refined, school guidance services throughout the country were growing and incorporating these improved tools and techniques. The development of organized school guidance services was a gradual process and is still far from adequate in many states. Although the development of adequate guidance programmes depends to a large extent on local initiative and on understanding and support by local school administrators, during the last ten years, more and more states have officially recognized the importance of organized guidance programmes by including a requirement for the provision of such programmes in the minimum standards required of all secondary schools in the state.

Although standards for school guidance programmes vary to some extent from state to state, requirements usually include the provisions similar to the following, which are summarized in abbreviated form from the standards currently in force in the state of Ohio.

Each secondary school shall have a comprehensive and workable programme of guidance services.

A. Such services shall include individual counselling, group guidance, and assistance to teachers in their guidance activities.

B. The school counsellor shall be professionally qualified. (The school counsellor must hold a certificate, the requirements for which include an M.A. degree in guidance plus work experience both in teaching and other occupations).

C. Each school shall provide physical facilities, staff, materials, and equipment for guidance. (A minimum of one full-time counsellor for each 500 high school students is recommended).

D. The guidance programme shall be centrally co-ordinated with appropriate functions decentralized among the school staff.

E. Teachers shall actively co-operate in the guidance programme.

F. Non-school resources shall be utilized in the guidance programme.

As school guidance programmes have developed in the United States, there has been fairly general agreement that a number of

specific types of activity or service are essential to a full-functioning programme. These basic guidance services include:

1. Provision for gathering, recording, maintaining, and using adequate information about each pupil. This service includes the maintenance of adequate cumulative records, including the recording of test results.
2. Provision for gathering, organizing, maintaining, and using adequate educational and occupational information materials, as well as materials related to personal-social adjustment.
3. Provision for adequate individual counselling for all students, as needed.
4. Provision for group guidance services for the discussion or handling of problems which can be treated more effectively or efficiently in a group rather than an individual setting.
5. Provision for referral of students to other school—or non-school agencies for assistance on special problems such as post high school training, employment, health, welfare, and the like.
6. Follow-up to insure that pupils counselled have achieved proper placement and adjustment in accordance with the plans they have developed.

In addition to these basic services, the school guidance programme also often provides professional time (1) for the counsellor to assist teachers in understanding students and helping them individually in a classroom setting; and (2) for the counsellor to conduct simple but needed research studies such as follow-up studies of graduates and early school leavers or the development of test norms for a local school district.

Guidance and Curriculum

Educators in the United States have long recognized the importance of encouraging the development of each student along the lines of his own particular abilities, aptitudes, and interests. They also recognize that individual development must be planned in relation to existing or potential educational and vocational opportunities. To accomplish this, it is necessary for schools to provide:

1. An adequate curriculum with sufficient course offerings to permit selection in accordance with student need. This emphasizes the importance of the comprehensive or multi-purpose high school.
2. An organized guidance programme to help each student understand his personal assets, learn of the educational and vocational choices open to him, and plan the training programme which will fit his needs most realistically.

Because of this close relationship between the guidance programme and the curriculum, an ideal time for the school which does not have an adequate guidance programme, to develop one is at the time that attention is being given to curriculum expansion. This is true since, with the development of multipurpose high schools, students become faced with the problem of making choices from among available course offerings. Such choices should be based on the fullest possible understanding of the students' abilities, achievement (his school record), aptitudes (his ability to acquire new skills), and interests.

The Role of the State and Federal Government

In order to understand the status of guidance services in the schools of the United States, it is necessary to understand some of the basic policies and practices of school administration.

In theory, and to a great extent in practice, local public schools are autonomous. In each local school district, there is an elected board of education, the members of which determine general policy and employ a Superintendent of Schools to administer the educational programme. The primary source of funds for building and equipping schools and for paying the salaries of staff members is through local taxation. However, supplementary funds are provided to local school districts for specific purposes from both the state and the federal government.

In most states, the state government controls local schools only through the establishment of minimum standards which all local schools must meet. Failure of local schools to meet these minimum standards may result in legal action forcing the school to either (1) improve its programme to meet minimum standards, (2) consolidate with one or more other local schools to provide one adequate school system, or (3) discontinue operation, in which case the local board of education has the legal responsibility for transporting its pupils to a school which meets minimum standards and paying the necessary fees for their education.

Services of the State Department of Education are primarily of three types: consultative, regulatory (only to the extent of assuring that local schools meet minimum standards), and financial (only to the extent of supervising the distribution of funds available from state or federal sources).

In the area of guidance services, state guidance personnel provide consultative and in-service education services to local schools, conduct or supervise research projects, publish guidance bulletins for local school use, and administer a programme of federal funds for local use in the initiation or expansion of local guidance and testing programmes.

At the federal level, the U.S. Office of Education provides advisory services to states, conducts research, publishes guidance materials, and administers a programme for the distribution of available federal

funds to the states for use by local schools. The U.S. Office of Education has no administrative authority over state or local schools except to make certain that funds allocated to the states for guidance purposes are expended in accordance with the law which provided them. This involves programme review and accounting procedures rather than administrative direction.

Because of this emphasis on local autonomy, there are wide variations among the states and among local schools in many states with respect to the extent of guidance services provided. However, the trend, as mentioned earlier, is for more and more states to establish minimum standards for guidance services which must be met by local schools, and also for many local schools to provide guidance services to a much greater extent than the minimum standards require.

A Survey of Adolescents' Problems

L. C. Singh

Shri L. C. Singh is a trained science graduate with nine years' experience in secondary schools. He is teacher-counsellor in the Government Higher Secondary School, Roop Nagar, Delhi, and is also the Secretary of the Delhi Educational and Vocational Guidance Association. He conducted an investigation into the nature of problems faced by boys and girls in six higher secondary schools in Delhi, and his findings are given in the brief report published below. The main object of the investigation was to see what the chief problems of adolescents were in a given locality and to find solutions to them through individual counselling and group discussion. —*Editor*

The Value of a Survey

Adolescence is a period of transition and involves psychological, social and intellectual changes. These changes in the students' life are fraught with problems which need to be carefully investigated and studied. A period of change is likely to be accompanied by potential difficulties. It has been established by studies made of children and adolescents that not only do adolescents have more problems than the children have, but that they also begin to be aware of them and feel an urge to solve them. In solving them, they need guidance and help. Proper guidance at this stage can make the life of an adolescent easier and happier.

Due to the new and more complex way of life in modern times, teachers and counsellors should have a sound understanding of the problems of our teen-agers. The study of the problems of adolescence is assuming still greater importance in view of the proposed establishment of guidance units in our schools. There is a practical need to know not in general terms but in specific detail about the problems of adolescence of the present student population in schools so that remedial measures may be effectively taken. The survey of adolescent problems at least on a locality basis would immensely help the guidance personnel and the administrator in the school. With this point in view, the investigator planned such a survey in a locality of North Delhi among students between the ages of 13 and 18.

Procedure

A check list of problems was prepared covering five main areas: (i) Health and Physical Constitution. (ii) Personal and Psychological Relations. (iii) Home and Family. (iv) Adjustment to School. (v) Curriculum and Teaching Procedures. In each of the above areas 20 problems were listed. Students were instructed to underline and put a circle round the serial number of the problems that troubled them most. The following example is given for illustration.

Problem area, Curriculum and Teaching procedures

1. Not really interested in books.
2. *Text books too hard to understand.*
3. Have not got the books in some subjects.
4. Lost the book and not replaced.
5. Could not do home task regularly.

The check list was prepared with the assumption that:—

(i) a great majority of students would be responsive to the items.

(ii) they would accept the task with a constructive attitude.

(iii) school administrators, teachers and counsellors would find the results usable.

The check list was administered to 1238 students studying in IX, X. XI, classes of 6 Higher Secondary Schools. The sample selected was from the Sub-Zone comprising of Kamla Nagar, Shakti Nagar, Prem Nagar, Vijay Nagar, Pratap Bagh etc. This sub-zone has 16 Government and aided Higher Secondary Schools. Out of these only 6 Higher Secondary Schools were selected at random, 2 representing each of the three types of schools. Boys, Girls and Co-educational. The following table shows the number of students of various classes and age groups to whom the check list was administered.

		Age Groups						
—	Class	13	14	15	16	17	18	Total
Boys	IX	110	110	41	25	..	.	305
	X	20	62	72	37	12	12	215
	XI	..	..	17	34	29	10	90
Girls	IX	100	116	32	20	..	..	268
	X	9	78	84	27	9	9	216
	XI	..	.	48	44	30	22	144
Total		239	385	294	197	180	53	1 238

Analysis and Discussion

The problems in each area were sorted out into three categories (a) major problems; (b) most significant problems; (c) minor problems.

They were separately analysed for boys and girls in different age groups. The analysis of problem area no. 4 (Adjustment to school) is given here for illustration.

Major Problems

Nature of the problem	Percentage of boys	Percentage of girls
Those students who say that they		
1. are not getting the required books from the library ..	67	76
2. get too little chance to get into sports	58	58
3. feel that there are no recreation facilities .. .	56	44
4. feel that they do not find classes interesting	51	..
5. get no chance to participate in students' activities	49	28
6. say that weak students are neglected	47	26
7. say that there is no regular checking of home tasks ..	46	..
8. say that there are frequent changes of staff	38	58
9. say that there was no subject teacher for a long period ..	37	..
10. are afraid to speak up in the class discussions		49
11. get too little chance to enjoy art and music	..	48
12. cannot get individual help and guidance	..	20

Most significant problems

Boys say that

1. they are disliked by the teacher.
2. they do not have good relations with their classmates.
3. they do not have recreational facilities.
4. they do not have adequate opportunities to consult teachers.

Girls say that

1. they are afraid to speak up in class discussions.
2. they are unable to get the required books from the library.
3. they do not get individual help and guidance.
4. they have no subject teacher for long periods.
5. they do not have opportunities to take part in sports.
6. they have not enough opportunity to enjoy art and music.

Minor Problems

Among the *boys* those who

1. need individual help and guidance are .. .. 12%.
2. feel that there are too many rules and regulations in school are .. 10%
3. are afraid to speak up in class discussions are 9%
4. have difficulty because of late admission into the class are .. .. 3%.

Among the *girls* those who

1. are not interested in attending classes are .. .. .. 8%.
2. feel that there is no regular checking of the home task 7%
3. feel that the classes are overcrowded are 7%
4. have difficulty because of late admission are 4%
5. have strained relations with their classmates are . .. 4%
6. feel that their teachers dislike them are 4%

Similarly, the other four areas were analysed, at the end of the check list, the students were also asked to list problems concerning them in the school. The chief problems listed by boys and girls are summarised below:—

No fans, rooms too hot, not enough urinals, scarcity of water and no proper arrangement for it, no separate room for study in free periods, changes of staff, teachers unable to take classes because of other duties, shortage of teachers, no proper arrangement for science practicals, neglect of weak students, courses not covered in time, talking by those at the back during class, indifferent teaching in some subjects, too much noise, lack of discipline, some teachers unable to teach well and fear of teachers.

Lists of the boys and girls who had major problems in many areas and who needed immediate individual counselling were made, schoolwise, for the information of the head of the institution concerned.

The problem areas were ranked as follows according to the number of problems in each area.

Rank	Problem area	Percentage of problem
1	Personality factors	69
2	Adjustment to schools	61
3	Curriculum and teaching procedures	58
4	Physical condition	40
5	Home and family	29

Major problems were also analysed according to various age groups and two major inferences could be drawn. Firstly, the age groups 16 and 17 in the case of boys and 15 and 16 in the case of girls, have more problems as compared to other age groups. Secondly, with adolescents there are more personality problems than problems relating to physical conditions. The percentage of problems in adjustment to school is also very high.

The investigator also analysed the data for two individual schools. A report of the analysis has been supplied to the principals concerned, for the necessary guidance to be given to the children and for reform in the school organisation. Suggestions for improving the students' adjustment in school and helping them to solve their problems were also included in these reports.

Conclusion

The investigator is of the opinion that the administration of the problem check list has been of help to the individual in identifying his or her problems and also to the administrators in acquainting themselves with the general problems of the adolescents in their schools.

Primarily the results of the survey as revealed by the check list serve to describe the problems of adolescents of one locality in general and of the individual schools in particular. Secondly, they help us to see how the various age groups of boys and girls differ in their problems. Lastly, they suggest ways and means of fostering adjustment through identifying the problem which may serve as a basis of individual counselling and group discussion in general terms, without relating these problems specifically to any one individual.

Training of Guidance Personnel

K. P. Chowdhury

In this article, Shri K. P. Chowdhury, incharge of the Bureau of Educational and Psychological Research, David Hare Training College, Calcutta, considers in detail several aspects of guidance work and offers suggestions, particularly with regard to the content and the scope of the training to be given to all categories of workers, both specialists and non-specialists in this field. —*Editor*

As guidance is a new movement in India, the term Guidance Personnel (in this context) needs a wider interpretation—it should include all who have a direct role to play in making guidance work a success. The guidance personnel who needs to be trained may be divided into two broad categories—Specialists and Non-specialists. The Second category includes Educational administrators, teachers and parents.

In Western countries where guidance has already been accepted as an integral part of education, separate formal training of educational administrators and teachers in guidance work is not considered necessary; they receive it in course of their professional training. But in India the guidance movement is in its infancy; educational administrators and teachers do not see its relevance to their work; they are not conscious of the contribution expected of them and in most cases, they do not receive any training for playing their part in school guidance work while they receive their professional training. Parents in India, play a much more important part in guiding their children than those in Western countries. But they have lesser opportunities of having scientific understanding of the problems of guidance and the methods for tackling them. As such, one need not be surprised if, instead of receiving help, we are receiving resistance from educational administrators, teachers and parents introducing scientific guidance work in schools. Practical experience is convincing us more and more that formal efforts to train the above categories of persons for playing their roles in guidance work is as important as that of training guidance specialists. It should be remembered that in team

work, success depends upon the efficient role playing of every one involved irrespective of the relative importance of their roles. Tabulation of the roles of educational administrators, teachers and parents in guidance work, along with the statement of objectives for formal training and the types of experience need to be given for the purpose should bring us into grips with the problem of training Non-specialists for the school guidance work.

Category of Guidance Personnel

1. *Educational Administrators*

(a) Heads of schools.

A. *Role to be played*

(i) Guiding deliberations of the school guidance committee as its Chairman.

(ii) Integrating guidance work to school work in general, specially from the viewpoints of time table and school resources (including man-power).

(iii) Counselling parents, when required.

N.B.—In our present social situation the Teacher Counsellor may not always command sufficient prestige for counselling the parents alone.

B. *Objectives for training*

(i) Development of proper-attitude towards school guidance work.

(ii) General knowledge and appreciation of (a) the philosophy behind guidance (b) Principal Guidance—Practices.

(iii) Development of skill (along with necessary theoretical background) in counselling parents.

C. *Types of experience to be provided*

(i) Participation (under expert supervision) in principal guidance activities (through a School Guidance Service).

(a) Developing interests and abilities of pupils through hobby clubs.

(b) Organising the school Guidance Corner.

(c) Organising Career Conference and Guidance exhibition.

(d) Interpreting mental-test scores in profile form for guidance purposes.

(ii) Seminars and workshops on the following, along with necessary readings.

(a) Guidance and its needs in our country.

(b) Guidance work and general school work.

(c) **Cumulative Record Card** and its maintenance.

(d) School Guidance Service and its activities.

(e) Occupational information programme and guidance.

(f) Mental testing and guidance.

(iii) Discussions along with necessary readings on—

(a) Guidance problems from the parents' point of view.

(b) Principles, methods and techniques of counselling.

(c) Participation in actual counselling sessions.

(b) *Inspectors of Schools*

A. *Roles to be played*

(i) Stimulating guidance activities and helping their integration to general school work (while on school visit).

(ii) Co-operating with the Regional Counsellor in his work with schools.

B. *Objectives for training*

Same as in case of Heads of schools except development of skill in counselling parents.

C. *Types of experiences to be provided*

Same as that of Heads of schools with the following differences—

(a) Lesser emphasis may be given to the experiences to be received in the field of Counselling (Item (iii)). Some theoretical discussion along with participation in one or two Counselling Sessions should be enough.

(b) Some theoretical and practical work in regard to carrying on follow up of guidance work in schools in cooperation with the Regional Teacher Counsellor.

1. *Teacher*

A. *Roles to be played.*

(i) Maintaining Cumulative Record Card.

(ii) Conducting hobby clubs for development of interest and abilities.

(iii) Constructing and using more dependable scales for evaluating pupils (Objective Tests).

(iv) Administering and scoring Psychological tests.

(v) Functioning as the friend, and guide to a few students (somewhat comparable to what is practised in "American Home Rooms").

B. *Objectives for training*

(i) Development of skill in items I to IV.

(ii) Development of the capacity to understand the problems of pupils (particularly in the fields of education, vocation and adjustment) and of giving them initial help.

C. *Types of experiences to be provided*

(i) Theoretical discussion followed by sufficient amount of practical work in fields I—IV.

(ii) Discussion in general on the concept of guidance and its relevance to usual school work.

(iii) Theoretical discussions on problems of pupils followed by studies of one or two children.

(iv) Theoretical discussion on how to help pupils in their educational vocational and adjustment problems followed by some practical experience.

(v) Acquaintence with the tools which may be used in the above work.

3. *Parents*

A. *Roles to be played.*

(i) Co-operating with the school in—

(a) development of proper educational and vocational motives in children.

(b) development of their interests and abilities.

(c) helping children in their educational vocational and adjustment problems.

B. *Objectives for training*

(i) Liquidating wrong notions and developing scientific attitude for co-operating in the fields mentioned above.

(ii) Acquainting the parents with the basic scientific knowledge in these fields, so that they may develop some insight in playing their roles.

C. *Types of experiences to be provided*

(i) Discussion on the concept of guidance and parents' roles in the work.

(ii) Workshop on wrong notions among parents in the field and how they can be substituted by proper ones.

(iii) Participation in Career Conferences, including Career Exhibition.

(iv) Discussion of the problems of two or three children (all data supplied) other than those of their own, to develop objectivity of out look.

(v) Seminar and Workshops on all the three tasks set for parents.

Organisation of Training

We should be responsible for the training? What should be its duration? How can it be best organised? These are the questions we should try to answer next. Probably the State Bureau of Educational and Vocational Guidance would be the best institution for training the Heads of Schools and Inspectors. Their education, background and status require that they should receive their training from the best source (from the point of view of manpower and other resources) available in the State, where development of proper attitudes constitutes the most important part of training. We should particularly be careful that the opportunities for experience which are being provided should be the very best, so that they may not produce negative results. The training potential of the Bureau (including the schools which serve as its laboratories) is the highest as it is engaged in practical work in regard to all aspects of guidance.

In the light of discussions made above on the objectives of training and the types of experience to be provided, we may suggest a minimum of two weeks and 10 days training for Heads of Schools and Inspectors respectively. The suggestion may be considered as tentative; practical experience may suggest an extension of the duration of training.

Heads of schools and Inspectors may be trained together (so far as they receive common experience) to develop identity of out-look providing the basis for co-operation when they return to their respective duties. This should also enrich the activities of the seminars and workshops by bringing together the experience of Heads of Schools and Inspectors. As opportunities for sufficient practical experience have to be provided and as the method of training would mostly be through seminars and workshops, the maximum number which can be taken for training at a time should not exceed 40.

So far as teachers are concerned, we have to make a distinction between those who have not as yet received their professional training and those who have received such training. For the first group, teachers training colleges obviously are the best places for receiving guidance training. Should we have a separate compulsory paper on guidance in our teachers' training colleges or should the training be integrated to the general training which is being given in those colleges, are the questions which naturally demand answers. We would prefer to cast our vote in favour of the second alternative. Teaching and guiding are not fundamentally different processes. No body should be considered as having qualified for the teaching profession unless he has gone through the experience which we have tabulated above in reference to "Guidance training" of teachers. There should be no difficulty in incorporating those experience in our usual teacher training programme. As for the teachers of the second category, we shall have to think of in-service training within the school. Participation in guidance activities under the leadership of the Head of the school and the guidance-specialist, along with discussions on the basis of practical problems, should equip the

teachers for playing their roles in the school Guidance Service. Regional Guidance Bureaus, Extension Services Departments of Teachers' Training Colleges and Specialists from the National Employment Service might co-operate in the in-service training of teachers. It is emphasised that the in-service training of teachers should be taken up seriously; planned and systematic programmes should be organised for the purpose.

Parent Teacher Associations

The burden of training parents for guidance work, should also be principally borne by the schools. Effective parent teacher association shall have to be formed. This association should organise systematic programmes for parent-education in the field of guidance. The Regional Guidance Bureaus, the Extension Services Departments of Training Colleges, the National Employment service and specialists from other organisations may be utilised for the purpose. The preparation of special tools for the purpose, such as appropriate literature, film strips etc., may be taken up at the All India level and the Central Bureau and the State Bureaus may jointly shoulder this responsibility. With the co-operation of the All India Radio, each State Bureau may also run a parents' Forum, through which it may co-operate with the parent education programme of every school in the state in a systematic manner.

The problem of training guidance specialists merits a separate discussion. In the first meeting of the Heads of State Guidance Bureaus (held in August, 1960), it was decided that there may be 4 categories of guidance specialists—(i) School Counsellor, (ii) Teacher Counsellor, (iii) Career Master, (iv) Regional Counsellor. Little difference was visualised between the first two categories—Because of administrative reasons, it was suggested that schools having three and more elective streams should have a school Counsellor while those with two or one stream should have a Teacher Counsellor. The Teacher Counsellor would devote half of his time to teaching and half to guidance work. But the school Counsellor will be a full time guidance worker. Whether the counsellor should also have some teaching periods is a debatable question; but this is outside the scope of the present discussion.

Functions of Counsellors

There seems to be little difference between the function of the School Counsellor and those of the teacher counsellor. The following is a list of the specific functions which the school counsellors and the teacher counsellors are expected to perform:—

(1) Drawing up quarterly schemes (along with allocation of responsibilities) for guidance in the school to be presented before the School Guidance Committee.

(2) Setting up the School Guidance Corner for dissemination of guidance information.

(3) Organising parent-education for guidance through the Parent Teacher Association.

(4) Organising the running of hobby clubs for the development of interests and abilities.

(5) Organising in-service training of teachers for guidance work.

(6) Counselling pupils and parents, jointly and also separately.

(7) Organising the preparation of visual-aids by the school for Guidance Exhibitions etc.

(8) Giving "Career talks" and organising Career Excursions.

(9) Collecting information about courses and maintaining an occupational information library.

(10) Organising the maintenance of Cumulative Record Cards.

(11) Functioning as the School Specialist for improving internal assessments of the School.

(12) Administering scoring and interpreting "Psychological tests"

(13) Presenting collected information about pupils in the form of "Guidance Profiles" and interpreting them.

(14) Organising remedial educational work for backward pupils.

(15) Organising remedial work for pupils manifesting undesirable behaviour.

There may be difference of opinion in assigning some of the functions in the above list to the counsellor. But it is maintained that each of the above are vital to the satisfactory working of the school Guidance Service and under the existing circumstances probably the Counsellor is the most suitable person for performing these functions.

After specifying the functions of the counsellor, we should consider the minimum back-ground required for benefiting from training for the functions.

Eligibility for Guidance Training

No body should question that graduation is essential for admission to the training course. There may also be agreement on the point that the candidate for admission should have some teaching experience, say of about two years. Unless, one has some experience of school and of problems of pupils, he may not be able to profit sufficiently by the training. Should a teacher's training degree be insisted upon? It should be remembered that the Teacher Counsellor would devote half of his time in teaching. We maintain that even school counsellor may have one or two teaching periods in a week. If one is first recognised as a teacher, he would be more easily acceptable by the pupils as a counsellor; besides he would probably get better co-operation from his colleagues. Further, a large number of guidance activities are actually educational activities and needs knowledge and training in the

methods and techniques of education. As such, it is felt that either a Teacher's Training Degree should be included within the list of minimum qualifications for admission or a short (but composite) course (both theoretical and practical) on education should be included within the contents for the training. Other things being equal, preference may be given to one holding a degree in Psychology. But the personality of the would-be counsellor, is not less important than his academic and training back ground. He must be one, who enjoys some leadership in the school both with pupils and teachers. He must also have a balanced personality. The Counsellors are expected to play such a vital role in our schools that besides insisting upon certain minimum qualifications and experience we may utilise Tests of Intelligence and Personality (particularly to test Leadership and Adjustment) in the selection of Counsellor for training. Participation in different pupils' activities outside the class room, may be considered an objective proof of the leadership of the teacher among the pupils.

Contents and Duration of Training

As for the contents of training, practical activities should be emphasised rather than theoretical ones. It should be constantly remembered that we in our country have a scholastic tradition and even our professional training courses tend to become over-theoretical. The syllabus may be conceived in terms of projects; every function that the Counsellor shall have to undertake, (as tabulated before) should constitute the core of a project; the theoretical and practical experience of the trainees should be integrated to such projects. For practical convenience, the projects to be undertaken may be classified under the following heads:—

I. Principles and practices in guidance (including projects in reference to functions of the counsellor, Nos. 1 to 6 as tabulated).

II. Information on Courses and Careers (including Nos. 7 to 9)

III. Mental measurement with necessary statistics (including Nos. 10 to 13).

IV. Scholastic Backwardness and other undesirable behaviour, (including Nos. 14 and 15).

For the purpose of "examination" and award of diplomas to the trainees, each of the above may be sub-divided into two papers (theoretical and practical) of equal value.

In the conference of the Head of State Bureaus referred to above, guidance specialists in India were of the opinion that the duration of the training of the counsellor should be from six to nine months. Considering the contents of training (as suggested above), it is felt that nine months should be the minimum period required for training the Counsellor. Economy in the time for training, may result in complete wastage of the training.

Career Master's Training

It has been proposed that there should be a Career master in every secondary school (other than higher secondary schools). The Career master would be a teacher of the school, who would be freed for a few periods in the week for guidance work. His functions are visualised as below:

(1) Organising the maintenance of Cumulative Record Card.
(2) Organising the running of the hobby clubs.
(3) Delivering Career talks and organising Career Excursions.
(4) Setting up School Guidance Corner and dissemination of guidance information.

The same principles should be followed in training career-masters as those suggested in the case of training counsellors *i.e.* every function of the careermaster as tabulated above should constitute a project for training; theoretical study, discussions and practical work should be integrated into the projects. For the purpose of the evaluation of efficiency acquired (through training) in undertaking the functions, each of the projects may be taken as an unit. It has been suggested that the duration of the training of career-masters may be for about three weeks.

Regional Counsellors' Training

Regional Counsellors are expected to co-operate with the work of the School Guidance Service within their jurisdiction. They are also to co-operate with the State Bureau in carrying on guidance researches and in co-ordinating school guidance activities within the State. As such, they should be thoroughly conversant with guidance activities in schools and in the State Bureau. It is desirable that the background of the trainees for this course should be richer than those for the counsellors' course. It is suggested that a good Master's Degree in Education or Psychology, or a Counsellor's Diploma with at least two years experience in school guidance work should be considered as the minimum qualifications for admission to the course.

The contents of the course may be organised under the same four heads as suggested for the counsellors' course. But the subject matter under each head need not be exactly the same with the counsellors course Again the theoretical portion in the course should receive greater emphasis than that given in the counsellors' course There would also be an additional paper under the head "Construction tools, with necessary statistics". In order to be trained in guidance research, every trainee shall have to undertake some research work during his period of training. The duration of the training may be one academic year. But six to twelve months additional time may be given for the completion of the research work.

Institutions for Training Guidance Specialists

It is felt that the training of the Guidance Specialists should be entrusted to the State Bureau. If the training is to be realistic and

practical in nature, it should be left to the care of the institution which is responsible for laying down guidance policies, for preparing guidance tools and for carrying on guidance research. Again, to secure broad uniformity, in regard to guidance practices, at least at the initial stages, it is necessary that the training of the guidance specialists should be undertaken by the State Bureau. But since the National Employment Service is in more lively touch with information on courses and careers, the training in this field may be given in close co-operation with it.

If the State Bureau is sufficiently strengthened in staff, it should be able to meet the need for training the Guidance personnel for the State. The experience received from running such training courses should also be educative to the Bureau. Besides, such works of the Bureau, as preparation of Guidance tools, carrying on Guidance Research, running model school Guidance services etc., may easily be co-ordinated with the work of training the Guidance personnel.

Report of the Seminar of Career Masters working in Multipurpose Schools of Madhya Pradesh

Given below is a summary of the Seminar of Career Masters of the Multipurpose Schools in Madhya Pradesh. The Seminar was held in February, 1960 and the full report was received from Shri N. C. S. Rao, Director of the Vocational Guidance Bureau, Jabalpur. The summary outlines some of the practical suggestions made by the participants of the seminar for improving guidance and counselling programmes in secondary schools. —*Editor*

A seminar of the Career Masters working in multipurpose schools of Madhya Pradesh was held from the 15th to 20th February, 1960 at the Prantiya Shikshan Mahavidyalaya, Jabalpur.

The seminar was attended by 12 career masters and was conducted by the staff of the Vocational Guidance Bureau. The purposes of the seminar were (1) to assess the guidance activities and programmes carried out by career masters in the schools; and (2) to ascertain the practical problems experienced by career masters in the operation of guidance services in the school, and (3) to develop educational and vocational guidance as an integral function of secondary education.

The participants were divided into three discussion groups: (1) Organisation and planning guidance work, (2) Principles and procedures of curriculum guidance, (3) Supervision and improvement of guidance services in schools.

Organisation and Planning of Guidance Work

The first group discussed problems of a suitable guidance programme in schools, the facilities and financial provision required, orientation of groups to educational and vocational guidance, orientation of parents, integration of guidance activities with co-curricular activities in schools and co-operation of the agencies, such as the employment exchange etc.

It was agreed that the career masters should implement a comprehensive programme of guidance which should include—

(1) interviews with students of 8th and 11th classes for preliminary guidance work,

(2) maintenance of (a) school leaving reports for pupils of Class XI (The reports to be sent to the Youth Employment Office), (b) records of those who discontinue after Class VIII.

The programme should also include orientation talks, group guidance (during one period per week per section for Classes VI, VIII and X), and collection of pupil information, orientation of parents or guidance through parent-teacher associations, home visits, career masters conferences and parents' days, formation of a school committee to enlist the support of the staff for guidance work, follow-up study and appraisal.

It was felt that there should always be a provision for re-allocation of subjects, if a pupil finds that he is a misfit in the stream or subject that he has selected. Since the career masters are whole-time school counsellors, it is desirable that they should not be given much of teaching work so that their efficiency as counsellors is not impaired.

The participants recommended that a non-recurring grant of Rs. 3,000 should be made available for the purchase of psychological test material, guidance books and teaching aids such as films and film-strips. Also a recurring grant of Rs. 500 should be made available for stationery, printing charges on schedules, questionnaires, inventories etc.

A separate room should be set aside in the school for the purpose of interviewing and counselling pupils.

Principles and Procedures of Curriculum Guidance

The second group discussed (1) general principles of guidance in the allocation of pupils to diversified courses of the curriculum; (2) the allocation procedures adopted in different States.

With regard to Item I, it was felt that the allocation procedure should be based on as exhaustive and comprehensive data as possible. Regarding Item 2, it was the opinion of the participants that the plan of allocation should take into account not only general intelligence, special aptitudes and educational attainments, but also temperament and character, leading interests, social conditions and parents' wishes. The career masters should exercise special care, scientific judgment and imagination in the allocation of border-line cases.

In the light of the experience gained by the career masters in this field, it was agreed to adopt the following criteria as the basis of allocation to the science classes.

(1) The level of general intelligence on *P.S.M.*, *V.I.I.T.*, 60th percentile and above

(2) Educational attainments in science and mathematics should not less than 50 p.c. of the marks in each subject. The percentage should be calculated on the combined marks of the promotion examination and the session marks in Class VIII.

(3) The teacher's estimates of assessments should be (B) above.

In addition to the above criteria, the data collected from other sources such as cumulative record cards, evidences of interests, co-curricular activities, educational and vocational goals etc, should be given due consideration in selecting pupils for the science courses.

It was agreed that the number of intelligence tests used for allocation purpose should be increased.

A group of career masters was entrusted with the important work of preparing objective type tests in languages, science, and mathematics with the help of the subject teachers in the schools. These tests would then be sent to the Bureau of Educational and Vocational Guidance, Prantiya Shikshan Mahavidyalaya, Jabalpur for standardization and for preparation of norms. The working group emphasized that career masters should undertake follow-up studies of cases that had been allocated to the diversified course of subject. Such studies provide material for effective and scientific judgement of the criteria adopted in the allocation of the subject.

Supervision of Guidance Services in Schools

It was the general opinion that the Bureau should give technical assistance and guide and direct the work of career masters so that guidance services may be more effectively developed. In order to promote better coordination and evaluation of work, the career masters should submit to the Bureau the report of progress of the guidance activities in their schools three times a year, preferably in March, September and December. The Bureau may publish such reports in its news bulletin for the information of other multipurpose schools.

The staff of the Bureau should visit multipurpose schools atleast once a year to study and judge guidance activities in the schools and to provide opportunity for discussing the guidance problem with the heads of the institutions. and members of the school staff.

The Bureau should conduct a professional training course, i.e., a diploma course for career masters. The course should be recognised at par with the B.Ed. The course should include training in the techniques of counselling, in the analysis and treatment of problem children and in the diagnosis and remedial teaching of backward students.

The group felt that career masters should be more appropriately designated, as school psychologists, which conveys more accurately their total function of counselling for personality development and dissemination of information on careers. The Principal of the Prantiya Shikshan Mahavidyalaya, Jabalpur, was requested to move the Government to effect this change.

The Training College Curriculum

G. Ramanathan

The Principal of the S.N.M. Training College in Ernakulam District, Kerala State, Shri G. Ramanathan, in this article, presents a thought-provking case for a new orientation in the B.Ed. curriculum: and proposes a detailed scheme of studies for the course. The quality of teacher training programmes is of special importance today, for without adequately trained teachers, the higher standard of achievement expectd of the secondary school in the Third Five-Year Plan will not be attained. Shri Ramanathan, who is an experienced educationist working in the field of teacher training, proposes several changes in the training course both in its content and duration to make it a finer instrument for implementing the new goals of secondary education. His suggestions spring from deep conviction and merit examination from all those who are interested in improving teacher education. —*Editor*

A basic flaw in the educational system in India is the discord between the school curriculum and the teacher-training programme. The syllabi of primary and secondary education have been undergoing changes during the last fifty years. On the whole the direction of the change has been healthy, though there have been erratic movements on occasions. But the syllabi of Training Colleges and Training Schools have remained singularly static. As a result, there has arisen a gap between what training institutions are expected to produce, and what they actually offer. Even in the past the complaint was often heard that the training course was too theoretical and was not of much use to the teacher in the class room. But the complaint then referred more to method than to matter. Now, the gap has extended to subject matter too. It is no wonder, therefore, that educational standards have gone down.

Unless the teaching is improved, we cannot achieve proficiency in schools and unless proficiency is achieved in schools, the teaching profession will be filled by ill-equipped, persons. Put thus, the situation appears hopeless. But the vicious circle can be broken by applying remedial measures at the root of the educational structure, namely, the Training College. For, it is the products of the Training College that occupy the strategic positions in the educational

structure, such as primary school teachers, teachers in High Schools, and administrators of schools. Thus any programme designed to bring about an all-round improvement of educational standards has to start at the Training College.

Nor is it difficult to apply measures of reform at the Training College level. For, the number of Training Colleges is comparatively small and it is possible to select competent persons to run them. Further the students of the Training Colleges are persons who have reached a certain level of maturity and are therefore capable of putting forth extra effort to improve their own equipment.

Any reform of the Training College curriculum must seek to remedy the two defects mentioned above, namely, the inadequate intellectual equipment of the students admitted to the Training College and the discord between the Training College syllabus and the syllabi of primary and secondary education. Thus, the training course should provide for a more thorough grasp of the subject matter and should enable the trained teacher to handle the primary and secondary school syllabi more effectively than at present. How these two objectives may be realised is the theme of this article.

Before we proceed to the details of the syllabus, a word may be said about the first objective, the improvement of knowledge in subject matter. The Indian tradition in teacher-training has accustomed itself to the unnatural division between matter and method. It has tolerated a course in matter. For instance, in some Universities it is possible for a B.Ed. student to offer the Teaching of Geography as an optional subject even though he has not read any Geography at all in the whole course of his educational career. That a thorough grasp of subject matter is a prerequisite to any kind of instruction or training in the teaching of it appears to be a forgotten truth. Apart from such extreme cases of defective admission requirements, the re-emphasis of subject matter in the B.Ed. syllabus could be justified by the unnoticed progressive devaluation of the admission requirements themselves. A Bachelor's degree in a particular subject is the prescribed qualification for admission to the B.Ed. course in that subject. But what is the value of B.A. or B.Sc. in terms of knowledge in that subject? This value has been steadily going down and one of the ultimate objectives of a reform of the B.Ed. course is the all-round improvement of standards, including the degree too. For, if the B.Ed. standard is improved the benefit would travel along the whole chain of educational stages, right up to the degree level.

But let it not be understood that the emphasis on subject matter in B.Ed. syllabus is a transitional affair to be abandoned as soon as the value of the Bachelor's degree rises to an adequate level. On the contrary, there is an intrinsic reason for the emphasis on subject matter. The subject matter envisaged in the B.Ed. syllabus is not of the same kind as in the syllabus. It is not as if, for example, the B.Ed. Mathematics student is asked to start Mathematics at the point where he left off in the B.A. course and

learn the next few chapters in Algebra, Geometry, Conics and other branches of Mathematics. The B.Ed. syllabus is not to be conceived as something intermediate between the B.A. and M.A. If it were so, one could say that if the B.A. standard is not adequate for the B.Ed. course let M.A. be the admission requirement and that therefore there is no need to introduce the subject matter element into the B.Ed. syllabus. It should deal with the history and nature of the knowledge rather than with the knowledge itself. Depth and thoroughness should be its motto rather than breadth. Thus, for instance, the Mathematics teacher should know something about numerical series and the behaviour of numbers, if he is to teach the four fundamental operations. Again, one who is to teach the history of any country should know something about its place in World History and how histories come to be written. Thus, in every department of knowledge, associated with every segment of its factual content, but not wholly separate from its main body, there is a quantum of background knowledge which is an essential equipment for the philosopher and educator who deal with that department. It may be left to the research scholar to travel widely and proceed to the very frontiers of knowledge. The teacher need confine himself to a small area of knowledge; but he should acquire thorough familiarity with its contents and its bearing with reference to the rest of the field. This is the kind of subject matter that has to be infused into the B.Ed. syllabus.

A digression is necessary at this point. Many persons question the claim of education to call itself a faculty, on a par with the Arts and Sciences. It is doubted whether there is at all a sufficient body of knowledge which can be labelled under Education and constituted into an Education course and which can raise Education to the status and dignity of a University Department. There is a general lack of conviction that Education offers any scope for research and advancement of knowledge. It is alleged that Education keeps itself just alive as a faculty by the small contribution it receives from Psychology. Any person who has learnt a subject well it is believed to be able to teach that subject if he is given a little classroom training. The following extracts, one from Britain and the other from America, indicate the public notion on this topic.

From the Times Educaional Supplement 31-10-1958.

Education, as a subject, with all its bits and pieces (aims of, psychology of, history of) should be held in check. A little is important, but it goes a long way.

From Time-Pacific Edition, 31-3-1958.

Most of our state teachers' colleges should be abolished as such and converted into liberal arts colleges with subordinate education departments. The teaching profession has not met this challenge. It is the duty of the Training College to take up the challenge and either establish the claim of education to the dignity of a faculty

or accept an inferior status as apprentice-masters in a particular calling. In either case, improvement of knowledge in subject matter is an essential goal to be kept in view while framing the B.Ed. syllabus.

It may be mentioned incidentally that the above argument holds good with much greater force in respect of Training Schools. The criteria for awarding marks in the valuation of answer papers at the S.S.L.C. examination and the procedure adopted in evolving a pass list out of the several mark lists should be kept in view when we assess the witness of an S.S.L.C. holder to become a teacher. He is indeed a bold man who will venture to suggest that such a one has in his possession the necessary intellectual equipment and that a little training in the principles and practice of education is all that is required to make him a primary school teacher. The infusion of subject matter into teacher training curricula is more urgent for Training Schools than for Training Colleges.

When we consider the question of improving the proficiency of teachers we have to take note of a danger that is now slowly creeping into the domain of educational thought and practice. It is believed that refresher courses, retraining programmes, seminars, workshops, and other such devices of in-service training will do the trick. But let us not forget that these schemes can only maintain efficiency at its level, and not create efficiency where it is absent. Now a new scheme is in the offing. An expert is supposed to impart retraining to about 20 teachers and each of them in turn is to function as an expert and give re-training to a similar batch of teachers. This sort of chain reaction, is expected to establish a vast net work of teacher training and increase teachers' efficiency in geometrical progression.

Now, it is a truism that we can teach less than we have learned. Only a fraction of our knowledge can be communicated to others. So in the geometrical progression mentioned above, the quality goes on diminishing at every step. So, it is time that we realise, once and for all, that there is no short cut to knowledge. It has to be reached by the hard way and the hard way here, is to improve the B.Ed. course. Once the march along the hard way is started, temporary devices such as those mentioned above may be employed only as a transitional programme to keep up the spirit of the teaching profession and the lay public.

The duration of the B.Ed. course is one year at present and the number of working days is sometimes as low as 150. A part of the time is allotted to teaching practice and the time left over is utterly inadequate to cope with the volume of reading and study required even by the present syllabus. If the syllabus is revised in the light of the observations made above the situation becomes worse. But to extend the period of training to two years is an extravagant and a needless imposition on students. This is one aspect of the matter.

Another aspect concerns the practical part of the training course as at present arranged. The present programme of teaching practice is too short if class room competence in the art of teaching is to be acquired and too long if only an understanding of methods is aimed at. All that can be done in the course of the training is to demonstrate methods of teaching and ask some of the students to try them out. Demonstration lessons by the Training College staff or other experienced teachers and experimental lessons by some of the students will be enough for the purpose. Actual apprenticeship, to be made compulsory for every student, should be spread over a longer period. So the B.Ed. course should cover two years, of which the first year will be a period of study in the Training College and the second year a period of apprenticeship in the school where the student gets employed. The B.Ed. examination will be over at the end of the first year; but the degree will be conferred only after the successful completion of the apprenticeship. The organisation of a machinery to supervise the apprenticeship and evaluate the apprenticeship record of work is only matter of administrative detail. The number of working days in the year of training should be increased to about 200.

Let us now consider the B.Ed. syllabus. It is beyond the scope of an article like this to include in it actual syllabuses in all subjects. So we can only suggest the outline of the whole scheme and the principles to be observed in drafting the actual syllabus.

Scheme of a syllabus for the B.Ed. degree

1. The B.Ed. course will consist of (a) a course of one-year training in a Training College to be followed by (b) a course of one-year apprenticeship in any school. The B.Ed. degree examination will be conducted at the end of the first year; but the degree will be conferred only on the successful completion of the apprenticeship.

2. Language occupies a pre-eminent place in the art of teaching and so, every teacher, whatever by his special subject, should have a minimum training in the teaching of language. It is enough if this training is limited to the use of language as medium of expression; it is not necessary to cover literature and rhetoric. Since the regional language is the medium of instruction there is a strong case for including it as a compulsory core in the syllabus, to be offered by all students. But having in view the language requirements of the first degree course, it is by no means certain that all those who join the B.Ed. course will have gained such basic knowledge of the regional language as would enable them to benefit by a teaching course in it. Individual differences in aptitude should also be considered. So it would only be expedient to allow a choice among different languages. Thus every student may be required to offer any one language, either a full course in it or a lighter course in it.

3. The tide against over specialisation has led to the re-organisation of the secondary school curriculum. In the new curriculum the various sciences and humanities have been grouped in the two broad fields. General Science and Social Studies. Further, the emergence of the concept of general education demands a more all-round competency on the part of the teacher than hitherto. The present B.Ed. syllabus does not meet these requirements. It should therefore be wise to co-ordinate the B.Ed. syllabus with the school curricula and to provide encouragement for teachers to acquire some familiarity with the handling of subjects outside their specialisation.

4. The subjects in the syllabus may be classified under two heads, major and minor. For every major there will be a three-hour paper with a maximum of 100 marks and for every minor there will be a two-hour paper with a maximum of 50 marks.

5. All the languages and Mathematics can be offered either as a major or as a minor. Physics, Chemistry and Biology will be major assignments and General Science will be the minor assignment corresponding to them. So also History and Geography will be major assignments and Social Studies will be the minor assignment corresponding to them.

6. The general subjects in the B.Ed. syllabus may be re-grouped and condensed into two majors instead of three as at present. The treatment of General Methods as a separate subject may be dropped and the essential principles thereof be added to other subjects. Students should become aware of current educational problems in India and so current problems may be included as a minor compulsory assignment.

7. Every student should be required to offer three optional subjects instead of two as at present and at least two of them should be majors. No subject should be offered both as a major and as a minor.

8. Thus the course is divided into two parts, namely, a general part, compulsory for all, consisting of two major, one minor, and an optional part consisting of two majors and one minor. It will be open to the student to offer a third major instead of the minor in the optional part The complete course will be as follows:—

General part

All the students are required to offer the following three subjects in the general part.

1 The Theory and Practice of Education (Major).

2 Psychology and Health Education (Major).

3 Current Problems in Indian Education. (Minor).

Optional part

The students may offer any three subjects out of the following, at least one of which should be from group A and one from group B and at least two of which should be majors.

Group A. Languages—Any of the following languages may be offered as a major or as a minor, but the same language should not be offered both as major and as a minor.

All regional languages and English, Sanskrit and Hindi.

Group B(i) Other subjects—Any of the following subjects may be offered as a major.

Mathematics, Physics, Biology, History, Geography and Child Education.

Group B(ii)—Any of the following subjects may be offered as a minor.

Mathematics, General Science, Social Studies, Physical Education, Measurement in Education, A.V. Aids in Education.

Note 1—Those who offer Physics, Chemistry and Biology under B (i) shall not be allowed to offer General Science under B (ii) and those who offer History or Geography under B (i) shall not be allowed to offer Social Studies under B (ii)

(2) Each college may with the previous sanction of the University offer instruction in any other special subject under B(ii)

The total marks will be—

	Paper	hours	Marks
General	I	3	100
General	II	3	100
General	III	2	50
Optional	IV	3	100
Optional	V	3	100
Optional	VI	2	50
Total ..			500

9. The syllabus in each optional subject shall be so designed as to ensure adequate knowledge of subject matter as well as of teaching methods. Pure contents courses as such need not be included. There must be scope for revised study, at an advanced level, of the subject matter which the candidate will be called upon to teach. Knowledge of the subject is more important than knowledge in the subject: but the former cannot be built up except on a firm groupwork of the latter. An outline of the history and nature of the subject should be one of the features of the syllabus.

10. The syllabus for every language offered as a major should include an outline of the general principles of linguistics, phonetics and

the International Phonetic Script applied to that language. Acquaintance with different forms of literature in the language, representative authors and specimen works should be insisted.

11. Every major syllabus should contain the corresponding minor syllabus: but the latter should not be bodily incorporated into the former. The minor syllabus may be summarised and the important items included in the major syllabus, where their treatment will be at an advanced level. Question papers will be different for the major and the minor.

12. The practical part will consist of Teaching Practice, Arts and Crafts, Physical Education, Health Survey and either Citizenship Training or A.C.C. training. During the first year the students will be instructed as to how to execute the practical work and during the second year they are expected to carry out the programme in the schools where they serve their apprenticeship. The marks will be as follows:—

		Marks
Teaching practice or/and Practical Work	First optional (major)	100
	Second optional (major)	100
	Third optional (minor)	50
Arts and Crafts		50
Physical education		50
Health Survey		50
Citizenship Training or A.C.C. Training		50
	Total	450

The final assessment of practical work and the award of marks for it will be done at the end of the second year.

13. The syllabus should be drafted in clear and specific terms. The scope and connotation of every item should be defined so as not to leave any uncertainty of interpretation. A few books for study should be suggested, say, not more than six books for each subject. It would be advantageous if the various items in the syllabus are supported by references to specific chapters in the books. This would help in dispelling much of the vagueness in the phraseology used at present. For instance, the phrase "the developmental process" is currently used in the B.Ed. syllabus, but its scope is unlimited. A reference to specific parts of some book or books would be of great help both to the teacher and to the student, because it will act as a rudder, controlling the limits and direction of study. An unduly brief syllabus will create vagueness and ambiguity of meaning, while an unduly elaborate syllabus will create confusion of ideas.

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EDITORIAL

Some educational problems recur with a seasonal periodicity. One of these is the annual concern about examination results. Year after year, we have observed with an increasing sense of depression the waste that results at the end of the secondary school in the shape of examination failures. We have analysed the malady and can claim to have approximated with fair precision to a probable list of the causes, which contribute to it. But the remedy seems as elusive as ever. And the reason is not far to seek. Education is as organically integrated as a physological mechanism. No ailment or cure affects a part without impinging on the whole, and an effort to "improve" results sets off the trigger on a series of chain reactions until the entire educational structure is permeated with the change. This is precisely what has happened with the examination reform which we launched a couple of years ago and which we believe holds—however remotely—the penacea to the ills which beset the examination system in this country. When educationists started to "reform" examinations, they soon found that they could not do it without improving the method by which the child learnt (or was taught) and this again was not possible unless everyone concerned with educating the child knew exactly what he meant to achieve by the process. This has taken the programme of reform right back to the start of the educational system—the curriculum and its objectives, and we are left wondering whether the term "examination" reform is not a misnomer—perhaps in a sense it is. for it has led us imperceptibly to the whole gamut of "educational" reform and the solution is as comprehensive as education itself.

This is as it should be. It might not have been difficult to bring about certain improvements in the final examination procedures if all other factors such as the mental equipment of students, the goals towards which they move and the mastery which they desired were as static and cast into predetermined moulds as in pre-Independence days Independence and democratic trends have upset this comfortable equilibrium and brought in many unpredictable forces to determine educational needs and objectives. With the insurge of numbers into its portals, secondary education is no longer the sacred preserve of a carefully selected few It has now to meet heterogeneous abilities and interests and prepare the pupils for widely varying goals. The curriculum has to be equally varied and so should the evaluation procedures be adapted to measure the varying abilities and achievements.

At the same time educational thought is convinced that it is not just or sound to judge the progress of a child of his performance at one single formal examination at the end of the year or school course but that his gradual all-round development should be observed and evaluated throughout his school course. This process of "internal assessment" was recommended strongly by the Secondary Education Commission and has since been reiterated by successive conferences of Secretaries of Boards of Secondary Education. Some Boards have introduced this measure in some degree but there are many aspects of the question which require further investigation and research.

A healthy inter-linking of educational objectives, curriculum content, learning process, teaching techniques and testing procedures combined with a rational system of internal assessment will, it is hoped, effect a long-awaited reform of not only the examination system but of the entire teaching-learning process.

Extension Services Newsletter

The reports received from the Extension Services Centres for October and November, 1960, have been combined in this newsletter.

North-Western Zone

The Honorary Director and the Coordinator of the *Department of Extension Services, Udaipur* attended a Conference of the Rajasthan Teachers' Association in which the problem of raising teaching standards in the schools of Rajasthan was discussed. The Co-ordinator acted as Chief Consultant at two seminars for the teachers of English, organised by the State Department of Education at Udaipur and Kotah. The participants analysed the syllabuses in English in classes VI, VII and VIII and prepared ten lesson-plans each. They also discussed how common errors in English could be eliminated. They prepared a few items of the new-type objective tests. The Co-ordinator during his visits to seven schools discussed with them the construction of objective-based tests, the structural approach to the teaching of English and remedial teaching of weak students etc. A project on the 'Promotion of International Understanding and Cooperation' was taken up by the Teachers' College. As part of this project, an intensive study of America is being made in the College. In two local schools—the Vidya Bhavan Multipurpose Higher Secondary School and the Lambardar School; the Department organised eleven film-shows. Mr. Tom A. Noonan, Chief Cultural Officer of the United States was invited to deliver a series of five lectures on various aspects of American life and history.

Under the auspices of the *Department of Extension Services, Bikaner*, the monthly meetings of the study circles of teachers of Social Studies, Language, Science and Mathematics were held regularly. The teaching of social studies in secondary schools, the use of audio-visual aids in this subject, the methods of teaching geometry and the teaching of English to the Junior secondary classes were some of the topics discussed at these meetings. The Honorary Director guided the deliberations of a seven-day seminar convened by the State Education Department of heads of high and higher secondary schools and educational officers. The Coordinator participated in the annual conference of the Rajasthan Teachers' Association in Chittor and contributed papers for the symposia on the Falling Standards of Education, and on Education in the Third Five-Year Plan. The Department organised a symposium to discuss the place of English in free India, the place of Sanskrit in secondary education, the problems of teaching Hindi in non-Hindi-speaking areas in India and the general problems of language teaching. A seminar was organised by the Teachers' College, on 'Evaluation of a Teacher's Efficiency.'

The Department of Extension Services, Central Institute of Education, Delhi, conducted a seminar for the staff advisers of UNESCO Clubs and six other seminars on the organisation of home-rooms and student government in schools, educational administration for principals of schools and for the inspecting staff, the difficult child, the organisation of mathematics clubs, school library organisation and its functions and truancy in schools. The activities of the Department and how to help to increase their professional competence were topics discussed in a meeting of the principals of schools convened by the Department. Mr. J. M. Ure, Education Officer of the British Council, spoke to 157 teachers of the Teachers' Study Circle, on the *problems in the implementation of the new syllabus in English.* A meeting of the Future Teachers' Study Circle was also held at which Miss *Prabha Goela of Indraprastha College, spoke on the* defects of the present-day examination system in the universities. The Coordinator paid visits to 13 schools.

The Coordinator of *the Department of Extension Services, Jamia Millia Islamia, Delhi,* visited, along with some members of the staff, 16 schools to acquaint herself with problems of the teachers. The *Craft Instructor of the Training College* gave a demonstration lesson in leather craft at one school Teachers of the English Study Circles of the Government Girl's Higher *Secondary* Schools at Jangpura and Lajpatnagar, Delhi, observed demonstration lessons in class VI on the teaching of English. Mr. Ure, Education Officer, British Council, gave a demonstration lesson in the Lajpatnagar school and explained the meaning, aims and methods of the structural approach to the teaching of this subject. In one meeting of the Study Circle of Hindi teachers, the participants discussed how to correct pronunciation mistakes; in another Shri K. G. Rastogi read a paper on 'Spelling Mistakes in 'Hindi'. Twelve teachers of the *Science Study Circle* met and discussed the heavy syllabus of the higher secondary stage. They decided to make suggestions in their next meeting for teaching *it efficiently. The Department* arranged a headmasters' meeting where suggestions for the activities of the Department were discussed, and organised a *symposium* on 'Education for National and International Understanding.' Shri P. N. Kirpal, Secretary, Ministry of Education, was the chief speaker on the occasion. A six-day course on 'Organising the School Library' sponsered by the Department, was inaugurated by Shri B. D. Bhatt, Director of Education, Delhi Administration, and was attended by 25 librarians of higher secondary schools. Nineteen films were screened during *this period.*

Twenty-seven teachers of secondary schools attended a seminar on 'Reading for Pleasure' organised by the *Department of Extension Services, Chandigarh.* The participants formulated a few projects to be worked out *in the* schools as part of the larger project on 'Reading for Pleasure.' With the assistance of the librarians of the University Library and the Central State *Library,* the Department arranged a training course in elementary library science for 28

secondary school teachers. The participants discussed the laws of library science, classification, the organisation of the school library and the means to be adopted for developing reading habits among the students. A 10-days training course in audio-visual aids for teachers from all over the State was held in collaboration with the Audio-Visual Aids Library. The course consisted of lectures, demonstrations and practical work in the making of charts, models etc. The Department also arranged a seminar for the teachers of economics of higher secondary schools of the area and a symposium on a 'A Successful Teacher.' The Co-ordinator visited six schools during the period under report.

The Department of Extension Services, Jullundur, arranged two seminars during the period under review; the first, on the maintenance of cumulative record cards and the organisation of guidance services, was attended by 14 teachers from 10 schools; thirteen teachers attended the second seminar on the making of audio-visual aids and their use A symposium on the "Impact of Educational Reconstruction on Practice—its Achievement and Failings" was attended by more than 300 school teachers. The Coordinator visited six schools.

The new Coordinator of *the Department of Extension Services, Patiala,* contacted a number of local headmasters and other educationists to help in the programme of the Department. The response was encouraging. The Department arranged a lecture by Mr. Robert Goodman, Public Affairs Officer of the American Embassy in India, on the 'Higher Secondary School in America.' Three films were screened during the period under report.

In a series of visits to participating schools, the Coordinator, *Department of Extension Services, Srinagar,* advised the teachers to borrow books from the Extension Library. The Department arranged film-shows in Srinagar as well as in the rural areas. In two schools of the city, the Coordinator gave demonstration lessons; one in mathematics, and the other in general science, and participated in the meetings of the Teachers' Study Circle.

Northern Zone

The Department of Extension Services, Agra has started a long-term course on the teaching of English, which will continue till the end of March 1961. The course is being conducted on Saturday afternoons by Mrs. Mabelle. B. Nardin, U.S.E.F.I. and the Coordinator. The object of the course is to orient teachers of English in the structure of English phonetics and its utility, the teaching of various branches of English, and the applications of researches in linguistics to classroom situations. During the three sessions of the course that have been held up-to-date, the participants were helped to understand the stress patterns, intonation and the sounds of the English language. Mrs. Nardin and the Co-ordinator had conferences with the teachers of English at the three local schools where the experiment is being carried on. In a seminar arranged by the Department for the teachers of Hindi in Akhil Bharatiya Hindi Parishad, the principles and proce-

dures for teaching Hindi to non-Hindi-speaking children were discussed. The Department continued its intensive work in the teaching of English with four schools in the area and had weekly conferences with the teachers of English in these schools. Also, lecture-cum-discussions were arranged at the Government J.T.C. Training College, on the aural-oral approach to the teaching of this subject. Ten film-shows were organised during the period under report.

Under the auspices of the *Department of Extension Services, Government Constructive Training College, Lucknow,* a meeting of the Central Science Club was held during the month. The members discussed the measures to be taken for intensification of science club activities and made suggestions regarding the forthcoming science exhibition and the science conferences; they discussed the participation in these functions of the science clubs of the area. During the visits to some schools in the districts of Kheri and Sitapur, the Co-ordinator was able to meet heads of institutions and members of the inspecting staff and established local centres for the loan of books from the Extension Library. Some schools have agreed to start projects and hold regular meetings of the staff study circles. The Department organised an advanced practical training course for teacher-librarians. Nineteen persons participated in this course. Two film-shows were arranged during the period under report.

The Department of Extension Services, Isabella Thoburn College, Lucknow, continued the evening course in Home Science, which is being conducted by Miss. V. Downes, the College Sister. It is proving to be of great practical value to the participants, who are teachers from girls' schools. At another workshop in Home-Science, the participants discussed among other things, the 'Improving of Nursing Aids with Common Articles Available in the Home' and 'the Preparation of Food—Simple but Nutritious' and 'the Deficiencies in Food Values and the Analysis of the Diet we eat.' The Department continued its intensive work in speech correction and speech-training, with various schools in the area In order to make science students more observant, the Department has introduced competitions in the collection of various types of specimens to be shown later on in an exhibition. The Department is also guiding some schools to encourage their pupils to keep scrap-books in order to enhance their interest in current events. Several topics have been selected, on which the students are collecting newspaper cuttings and other material. Later, it is expected that the pupils will classify this material for future use. The Co-ordinator spoke on 'School Discipline' at a meeting of the teachers of Lalbaug Higher Secondary School. The Torso model and other audio-visual equipment were loaned to some schools.

The Department of Extension Services, Meerut, arranged two demonstration lessons for the benefit of teachers of local schools one on 'Humayun' and the other on 'English according to the Structural Approach.' Under the auspices of the Teachers' Study Circle, the Department arranged a symposium on the 'Teaching of

History for Internal Understanding', another on 'Teacher-Pupil Relationships', and a seminar on the teaching of English. The new Coordinator visited about forty schools to establish contacts and discuss programmes. During these visits, nine film shows were arranged at different schools.

A three-day workshop on the 'Preparation of Teaching Aids for Teachers of History, Geography and Science' was organised by the *Department of Extension Services, Allahabad*. The participants were helped to learn how to prepare common teaching aids such as the bulletin board, the felt-board, and the khaddar graph, portable chalk boards, clay models, charts etc. The Department also arranged an exhibition of audio-visual equipment. With a view to spreading the extension activities to the neighbouring districts, the Department organised meetings of principals in the additional districts assigned to the Centre at Hamirpur, Banda and Kanpur. The main features of the Extension Programme were explained to the participants and steps were taken to formulate tentative schemes for starting the activities of the Department in these centres. The following meetings of the Central Study Circles were held:

Geography: A discussion on 'the Use of Atlas and Globe.'

History: A discussion on 'the place of Charts and Diagrams.'

Science: A talk on 'Problems of Evaluation in Science.'

Hindi: A discussion on 'Hindi Composition.'

Maths: A talk on 'Teaching of Factors and Directed Numbers.'

English: A talk and discussion on 'the place of Translation in the Teaching of English at the Higher Secondary stage.'

Thirteen films were screened and eighty books loaned to the teachers during the period under review.

The Department of Extension Services, Banaras Hindu University, arranged a workshop for 21 teachers on the 'Concepts of Evaluation in Hindi.' Another seminar on the 'Teaching of Art' was attended by 29 participants. Film-shows were arranged for the participants of both the seminars.

The Honorary Director and the Coordinator of the *Extension Services Department, Raipur*, visited six schools, delivered Extension lectures and discussed with the members of the staff, improvements in the methods of teaching various subjects.

A seminar on 'Remedial Teaching in English' was arranged by the *Department of Extension Services, Jabalpur*, in which the common drawbacks in the attainment of pupils of secondary schools in English were analysed and suggestions for remedial measures to be adopted were discussed. Meetings of the principals and teachers of the two schools, whose extension projects have been approved by the D.E.P.S.E., were held, wherein the programme for the remaining

period of the session was chalked out. The Department organised an evaluation workshop, which was conducted by Shri D. G. Kulkarni, Evaluation Officer of the D.E.P.S.E. With the collaboration of the Vocational Guidance Bureau, the Department conducted a two-month course on 'Educational Guidance,' which was attended by 24 teachers. A meeting of the Headmasters' Forum was attended by the Honorary Director and Shri A. H Hemrajani. Field Adviser of the D.E.P.S.E., who discussed with the participants the scope of the activities of the Department. Shri Hemrajani also visited two local schools and the Government Multipurpose School at Damoh. Eleven film-shows were held and fifty-five library books were issued to several schools.

A ten-day course of 'Athletics and Physical Education' was arranged by the *Extension Services Department, Aligarh.* The object of the course was to prepare the teachers for organisation. administration and supervision of day-to-day activities with regard to field and track sports. and also to train the teachers for coaching their athletes for participation in the State and all-India competition. Discussions were held in the morning while the practical training was imparted during the afternoons. The Department convened the second weekly conferences of the teachers of schools participating in the intensive work in the teaching of English. The participants prepared a list of about 500 words which are closely related to the daily activities of the children of that age group. The Department also organised three Extension Services Days; the first at Kishori Raman Girls' Inter College, Mathura, the second at NREC College, Khurja and the third at AGHS School. Kasganj. The programme consisted of discussions and demonstration classes. The topics discussed in the first school were the analytical and sympathetic methods of teaching mathematics: in the other two schools, the problems of teaching English were discussed. During these Extension Services Days, meetings of the librarians in the area were convened at which Shri T. P. Saxena, Lecturer in Library Science, Muslim University Library, Aligarh. spoke on 'the Planning and Organisation of School Libraries'. An exhibition of books and film-shows were also arranged to these occasions. At a meeting. convened by the Department. of the heads and teachers of schools whose experimental projects have been approved for financial assistance by the D.E.P.S.E., effective methods of conducting projects were discussed. During the period under report, as many as 1,000 students attended the film-shows, organised by the Department.

Central Zone

The Department of Extension Services of the Secondary Training College, Bombay, organised two 10-day seminars for the teachers of English at Nasik and Amalner. At Nasik, 45 secondary school teachers discussed the structures of English. phonetics, substitution tables, guided composition, group work with large classes and techniques of testing and evaluation. Model lessons were given during the seminar. On the closing day, Mr D. H. Spencer of the British Council, gave a

talk on phonetics. At Amalner, Prof. B. N. Naik and Shri S. B. Sohoni acted as chief consultants. The programme consisted of talks on English structures, demonstration lessons. phonetics and the discussion of the English syllabus for standard V. Dr D Burn of the British Council gave demonstration lessons in the teaching of English in standard V and VIII, which were attended by 25 teachers. The Coordinator accompanied the members of the Nigerian Commission to three high schools in the area to enable them to study the working of the Extension Department. The Department also brought out, on behalf of UNESCO. a publication 'All Men are Brothers,' depicting the life and philosophy of Mahatma Gandhi.

The Coordinator of *the Extension Services Department, Tilak College of Education, Poona,* discussed with the staff of the M.E.S. Girls' High School, Poona, and Mahila Ashram, Poona, the details of the two experimental projects for which financial assistance has been sanctioned by the DEPSE At a workshop arranged by the Department and attended by 42 science teachers, the basic concepts of objectives, learning experiences and preparation of test items were discussed The Coordinator offered guidance services to the teachers of four schools that he visited. Books were lent to several local schools and the five film-shows were arranged The Torso model and other equipment were lent to a school in the area. The Coordinator gave a demonstration lesson in geography with the help of a film-strip.

The Department of Extension Services, Ahmedabad. organised a workshop on 'the Behavioural Problems of School Children.' The workshop centred round a few problems that the participants actually face in their day-to-day work as teachers. The Department also helped in the organisation of a workshop arranged by the Shreyas to acquaint teachers with the questionnaire technique as an essential tool for collecting data. The Coordinator attended a conference of the Headmasters' Federation of the Gujerat State and worked as chief consultant in planning the activities. The Coordinator visited several schools in connection with the project work undertaken by them. Teachers of three schools visited the Extension Department to obtain guidance for their special problems. Eight schools borrowed books from the Extension Library; and teaching aids in the form of film-strips etc., were lent to several schools in the area.

The Department of Extension Services, Warangal, organised two Extension lectures by Shri N. N. Sastri, Headmaster of the Govt. Practising High School, Hanamkonda. and by Shri K Vendantachari of the College of Education. Osmania University The first was on the problems of training teachers for primary and secondary schools and the second was on the concept of educational evaluation. Shri Sastri emphasized that training institutions should concern themselves more with the reorientation of the teachers' outlook towards the basic problems of education rather than with the traditional problems of methodology. At a meeting of the Central Science

Club, it was decided that separate groups should be formed to undertake different projects. A talk on 'Insecticides' was arranged under the auspices of the Club; as well as a lecture on 'Plastics' by Shri C. Venkateswarlu, Lecturer in Chemistry, Arts and Science College, Warangal. The Department arranged 7-day evalution workshops in mathematics and social studies. The basic concepts of evaluation were explained to the participants who worked out a large pool of test material on the subject The Department also arranged a five-day seminar on 'Dynamism in the Teaching of English Language.' The participants discussed how English could be taught more effectively and also the teaching of functional grammar and composition. Seven schools were visited: 75 books were issued from the Extension library, and nine films were exhibited.

Two workshops on 'Terminology for Higher Secondary Courses.' one in Physical Sciences and the other in Natural Sciences were conducted by *the Department of Extension Services, Rajahmundry.* The participants selected Telugu equivalents for English terms in the light of the standard lists prepared by the Andhra Government. Under auspices of the Department, Shri M. D. Devadasan, Evaluation Officer of the D.E.P.S.E., conducted a workshop on evaluation for a period of four days. The groups worked out test items with reference to each of the objectives listed by them, and some items were framed with reference to environmental situation. In his visits to three schools, the Coordinator discussed with the teachers the structural approach to the teaching of English, the work of the science clubs etc. The Department set up a zonal library at Mclaurin High School, Kakinada with about 45 books from the Extension Library. Three film-shows were arranged during the period under review.

Twenty-two teachers of Kurnool district attended a five-day seminar on the Teaching of English organised by *the Department of Extension Services, Kurnool.* The implications of the structural approach to the teaching of functional and formal grammar and the use of various teaching aids were discussed in detail. Since the science teachers of the area expressed their difficulties in giving educational guidance to the pupils seeking admission to Class IX of the higher secondary course, the Department organised a workshop for twelve teachers of science, who worked out tests for political science comprehension and mechanical reasoning. Teachers also worked out the basic abilities and the aptitudes that are necessary for good achievement in academic and engineering courses, and framed the tests accordingly. Some staff members of the Training College visited schools in Anantapur and Cuddapah. They discussed with the Staff of the local schools the new approach in evaluation. Invited by the headmistress, the Coordinator visited the Government Girls' Higher Secondary School, Kurnool and guided the staff in the maintenance of cumulative record cards. He also initiated a project in biology. The pupils of the school will study how plants propagate

their seeds, how plants get their food, how plants grow and classification of plant life.

The Coordinator of *the Department of Extension Services, Osmania University,* conducted two brief courses in English at Kollapure and Wanaparthi. Demonstration lessons were arranged during the courses. The Coordinator visited seven schools to discuss the 10-point programme developed by the Department for the improvement of secondary schools in the area. Three films and twenty books were loaned to the associated schools. The Co-ordinator also spoke at a number of gatherings on topics such as 'Basic Education and Modern Educational Philosophy,' the 'Role of Educated Women in Rural India,' 'Creative Play and Language Teaching' and 'Extension Services in Schools'.

Twenty-five teachers attended a week-end seminar on the teaching of social studies arranged by the *Extension Services Department, Nagpur.* The concept of social studies, the unit method of teaching, the syllabus and learning experiences were discussed with the participants. Shri R. V. Dakshindas, Senior Lecturer of the College, addressed a Secondary School Teachers' Conference held at Hinganghat, on Problems of Education in Schools to-day. The Co-ordinator initiated a discussion on problems and methods of teaching English, with 70 secondary school teachers who attended this conference. Film shows were arranged at local schools and 24 film strips on 'Lands and People' were lent to the Multipurpose High School, Saldhana, for classroom use. Shri A. H. Hemrajani, Field Adviser, D.E.P.S.E., visited the Department and discussed with the local headmasters the scope of activities of the Extension Department.

Eastern Zone

The Department of Extension Services, Turki, organised a symposium on 'How to Improve Classroom Teaching' which was attended by 27 teachers, and another on the 'Teachers' Role in Secondary Schools' and arranged two demonstration lessons, one in geography and one in history, as well as a course on Action Research at the Dighi Training School, Hajipur Another on Group Dynamism was conducted by the Co-ordinator. In a seminar on library organisation, also organised by the Department, the participants discussed possible improvements in library organisation An Extension Lecture on the 'Relationship between the School and the Community' was held in Dighi School. Shri R. S. Sinha, Evaluation Officer of the D.E.P.S.E., guided a workshop in evaluation at the Training College.

The Department of Extension Services, Bhagalpur, arranged meetings of the Teachers' Study Circle in which topics such as 'How to Improve Classroom Teaching in English' and the 'Organisation of School Libraries' were discussed. The Coordinator gave a demonstration lesson in English according to the structural approach. Four course-cum-demonstration lessons were organised by the Department, three in the teaching of Hindi and one in the teaching of

Mathematics. Twenty-nine teachers participated in a seminar on the 'Teaching of General Science' held at the Training College. The Coordinator visited fourteen schools and organised film-shows at four schools and lent books to the staff.

The Department of Extension Services, Santiniketan, organised courses on aims and purposes of the structural approach to the teaching of English, the teaching of practical geography, beautifying the school and school library organisation. Demonstration lessons were arranged and a large number of exercises in English phonetics were given to the participants with the help of B.B.C. records. During the course on beautifying the school, the following activities were planned: terracotta painting and painting on stumps of bamboo, paper applique, murals on masonite boards, stencilling and spray painting and designing and pattern drawing, work including alpana work. In the library course, the participants learnt about classification and cataloguing. They were taken round the Central Library where they studied the lending system and a chart based on a modified system of Dewey's Decimal Classification. Shri P. D. Sharma, Evaluation Officer of the D.E.P.S.E., conducted an evaluation workshop lasting four days. The Department conducted a week-end course on Action Research which was guided by the Coordinator. He pointed out the distinction between action and fundamental research and chalked out the various stages followed in connection with the action research. Another course on physical education was also conducted. The organisational aspect of the work was discussed and demonstrations were given of such athletic exercises as are helpful in ensuring physical fitness and developing competence in various track and field events. Accompanied by some of his colleagues from the Training College, the Coordinator visited some schools in the area to discuss with the staff the programme for beautifying the school campus. He also visited the Smriti Kanta Memorial Senior Basic School, Raipur and studied the Craft activities of the pupils Twelve film-shows were held and 210 books were issued from the Extension Library.

The Department of Extension Services, Institute of Education for Women, Alipore, Calcutta, concluded the Training Course on Spoken English which had been started earlier. Ninteen participants attended the course. The Department convened two meetings of the Spoken English Group to plan a programme of its activities. The Coordinator observed the teaching of English in eight schools.

The Department of Extension Services, Hoogly, conducted two courses, one on practical geography for 18 teachers and the other in biology for 17 teachers of higher secondary schools. The first consisted of theoretical orientation, demonstrations, practical work by participating teachers, educational excursions, exhibition of films and the uses and manipulation of geographical implements and apparatus. The second consisted of lectures on selected items in the syllabus, preparation of sets of instruction for pupils in the laboratory and suggestions for the regrouping of items in the State syllabus. Five films were exhibited during the period under review.

The Department of Extension Services, David Hare Training College, Calcutta, conducted three workshops at Ramnagar in the district of Midnapore. The workshop on maintenance of cumulative record cards was guided by Prof. D. Mahanta of the Bureau of Educational and Psychological Research The evaluation workshop in Bengali was attended by 19 teachers of Midnapore District. Prof. P. K. Majumdar of the College Faculty, conducted the workshop on evaluation in Mathematics. The Department also arranged a refresher course on elective mathematics, which was attended by 58 teachers from schools in the State. Problems which the teachers face in this subject were thoroughly discussed. At the suggestion of some of the headmasters of the schools in the area, the Department arranged a part-time course, which will be held once a week for several months, on the 'Structural Approach to the Teaching of English.' Teachers of social studies met to discuss the effective teaching of the subject and the importance of the group discussion method. 'The Place of Sanskrit in Bengali Language' was the subject of a talk given by Shri J. C. Bhattacharya of Kamla High School to the Bengali Teachers' Study Circle. The talk was followed by a lively discussion. Science teachers listened to a talk on the 'Use of the Flannelograph in the Teaching of Science' and observed a demonstration on 'How to Use the Flannelograph.' The Honorary Director visited some schools in the city. The Department arranged a film-show for 200 pupils of the Sakhawat Memorial Girls' High School, Calcutta. Mr. J. G. Odgers, TCM Consultant from the Ohio State University, paid visits to the Department and two schools, and discussed with the staff their problems relating to educational guidance.

The Department of Extension Services, Cuttack, arranged a refresher course attended by 56 teachers, on the teaching of English, with discussions on the syllabus and methodology, several demonstration lessons and a lecture on phonetics. The Coordinator visited 16 schools in connection with guidance services He also visited the science club of the R.C. School, Cuttack, and later discussed with the headmaster and the English Teacher the progress of the work on the experimental project in the teaching of English. He gave demonstration lessons in mathematics in some schools and discussed with the staff in others, the cumulative record card system. One hundred books were issued to different schools from the Extension Library during the period under report.

Southern Zone

The Central Science Club attached to the *Extension Services Department, Mangalore,* completed its project on 'Edison and Discoveries' after collecting material on the life and discoveries of the famous scientist. It has now begun another project on 'The Solar System' The Department despatched to all high schools in the area the finalised syllabus in the electives under humanities and Sciences. The Department organised a week-end course for the teachers of Kannada in which teaching aids in Kannada, samples of composition and transcription by students of different grades, relay of recitation through

the tape recorder formed some of the activities. The Coordinator visited several schools in the rural area of the Kudalur Taluka and at Chikmagalur, and discussed with the staff the problems of craft teaching, physical education and audio-visual aids. Film shows and tape recorder services were also given to a number of schools.

A Conference on 'Diagnostic Tests in Arithmetic' was organised under the auspices of the *Department of Extension Services, St Christopher's Training College, Madras,* which supplied forty copies of a prepared test to the participants, for use in schools. Shri E. D. Savariroyan of the Madras Christian College School, who was mainly responsible for designing the test, explained its scope in detail to the thirty participating teachers, who discussed its various aspects. Three more Conferences on 'Diagnostic tests in Arithmetic' were held in the moffusil areas and fifty copies of each of the tests were distributed among the participants. A meeting of the sub-committee for designing diagnostic tests in Algebra, was held during the period under report The members decided to consolidate the test at the next meeting. Twenty teachers from 10 schools attended a three-day workshop on 'museum techniques' organised by the Department. Accompanied by Miss. Vajreshwari, the Co-ordinator visited Goodlet High School, Sholinghur and discussed with the staff the practical work for the project in Social Studies started in that school. Some problems in the teaching of science too were discussed. Visits were made to St. Anne's High School in connection with the project for improving the teaching of English in standard VIII. The Co-ordinator also visited five other schools in order to see the follow-up activities arising out of the workshop on 'museum techniques.' The Department is collaborating with the South India Teachers' Union for holding a 'Science fair' and 'Science Seminar' in the new year.

The *Department of Extension Services, Annamalai University,* conducted the last two structural English courses under the guidance of Dr. G. S. Nutley, who also gave demonstration lessons in four schools in the area. A five-day seminar on the teaching of 'Social Studies' was conducted under the guidance of Dr. A. F. Turhollow, Visiting Fulbright Professor of History. The participants discussed in detail the syllabus in Social Studies for classes VIII, IX and X, prepared lesson plans and screened three films on the 'Broader Concept of Method' and 'Diagnosing and Planning Adjustment' during the seminar. The Co-ordinator visited a number of schools and discussed with the staff the programme of intensive work. Films, filmstrips and books were lent to several schools in the area.

The Co-ordinator of the Department of Extension Services, Madurai, while inaugurating a science club at the Municipal High School for Girls, Madurai, explained the different types of activities that can be organised in the club. At a meeting of the Central Science Club, it was resolved that members should co-operate in the intensive work in the teaching of science in the participating schools and participate in the fifth all-India Science Teachers'

Conference and in the Exhibition to be held during the conference. Intensive work in science teaching has been taken up in the Union Christian High School and St. Mary's High School, Madurai. The participants of a two-day seminar of heads of secondary schools of Madras resolved to form an association; they also discussed the various activities of the Extension Department and made several suggestions. The Co-ordinator demonstrated the use of Audio-visual aids in seven schools in the district. The Department arranged an exhibition of 5 films at the Saurashtra Girls' High School, Madurai, and at 6 other schools. Books from the Extension Library were lent to 4 schools.

The twenty participants of a five-day course in Library Science conducted by the *Department of Extension Services, Coimbatore,* learnt about the fundamentals of library work viz.—accessioning, classifying, cataloguing, referencing, and about bibliography and library administration. They prepared a list of 100 books which they considered necessary for their school libraries and chalked out a programme of future work in their schools. After preliminary discussions in a meeting convened by the Department, 42 women teachers of science from Coimbatore formed an association of science teachers in the City. The Department conducted a three-day workshop on 'Personality Assessment' and on 'The Maintenance of Cumulative Record Cards for Pupils.' Twenty-four participants evolved a form of cumulative record card for adoption in schools. In a special meeting of the Advisory Committee, various activities of the Department were discussed. Sixteen high schools in Coimbatore and 7 in Erode district were visited by the Co-ordinator in connection with various guidance activities.

The Honorary Director and the Co-ordinator of the *Department of Extension Services, Trivandrum,* visited about twenty schools in Trivandrum and Quilon districts, in connection with the follow-up activities, library services and the programme of experimental projects that they could undertake with the financial assistance offered by the State Education Department. The Coordinator presided over a conference of upper primary teachers at which the participants discussed how to raise the prevailing low standard of education in schools and how the Extension Department could help the schools in this task. He also spoke on 'New Trends in our Education System' at a meeting of teachers at the Infant Jesus A.F. High School for Boys, Tangassery.

Mrs. Chandran, a retired headmistress, conducted two intensive courses in the structural method of teaching English, under the auspices of the *Department of Extension Services, Kozhikode.* The Department also arranged a special course on the preparation of puppets. The Co-ordinator visited 23 schools and discussed with the staff, various subjects such as examination reform, science club activities experimental projects etc. The staff and the students of the Government Training College, Tellicherry, had talks with him

on some research problems in evaluation. The Department lent audio-visual aids to Ganapet High School, Chalapuram. Film shows were screened at five schools and 41 books were issued from the Extension library.

The Department of Extension Services, Trichur, reports that 31 schools have agreed to start the experimental projects for which the State Department of Education has sanctioned a sum of Rs. 1,500 as grants. The Co-ordinator paid visits to some of these schools to guide their experiments. Six high schools in Trichur town have started science clubs, and the Central Science club has been meeting in turn each of the member schools. The clubs have been carrying out useful activities.

EXTENSION HIGHLIGHTS

Practical Geography

A thorough course in practical geography was organised by the *Department of Extension Services, Visva Bharati, Vinaya Bhavan, Santiniketan.* Shri Kanan Gopal Bagchi and Srimati Usha Sen, both of the Calcutta University directed the course, which comprised of practical activities both in the field and the laboratory. It included physiography of the home district, map study, projection weather observation and surveying. Shri Bagchi discussed the physiography of the home district and led an excursion to the bank of the Kopai. He dilated on the different aspects of landscape and demonstrated how to look for clues indicating the stages in the cycle of erosion.

He also discussed classification of rocks and indicated methods of identifying them in the field. The significance of topographical sheets as tools for a geographer was discussed and various categories that could be inferred from them were demonstrated. The participants were also initiated in the techniques of drawing sections, preparation of sketches and the use of conventional colours for making them effective. Principles of map projection were discussed and the participants were shown how to draw graticules on cylindrical, conical and zenithal projections.

The participants visited the Institute of Rural Higher Education, Sriniketan, and were shown how to handle the plane table. Under the guidance of Srimati Usha Sen, they surveyed a portion of the campus of the Institute. For weather observation, the participants were taken to the Meteorological Observatory at Sriniketan and were shown how to record the velocity of wind from an anemometer, measure rainfall, take readings from maximum and minimum thermometers and calculate humidity with the help of the wet and dry bulb thermometer. They learnt also how to use the vernier scale and make other necessary correction in recording atmospheric pressure from a key-type barometer. The participants had the rare opportunity of observing how electrical disturbances and the frequency of electrical discharges in the ionosphere were detected and measured with the help of such sensitive instruments as Radio Maximograph, Radio-Goniograph and Atmo-Radiograph.

The participants prepared temperature and rainfall graphs from data available from different sources. They studied the weather maps and charts published by the Meteorological Department of the Government of India. They learnt how to delineate regions of high and low pressure, ascertain distribution of precipitation, assess the degree of cloudiness and detect the condition of the sea from the charts available

Teaching of Science

A three-day seminar on the teaching of science was organised by *the Department of Extension Services, Aligarh.* Twenty-six participants took part in the discussions on topics such as science teaching and the challenge of our times, new trends in science education, objectives of science teaching in the rapidly changing world of today, the place of basic sciences, general science and specialisation in different branches of science in the science syllabus at the secondary stage, visual aids and evaluation in science teaching. Talks, discussions and group work were conducted in the morning sessions and practical work in the afternoon.

A Science Fair organised on the occasion by the Department, was attended by nearly 300 students and most of the science teachers. The participating schools exhibited a variety of models and charts prepared by their students.

A Good Health Week

The Department of Extension Services, Central Institute of Education, Delhi, organised a good-health week from 15th to 19th November. Twenty-six schools participated in this programme. During the week, special attention was paid to the cleanliness of the school premises, inculcation of health habits in students and organisation of special programmes on health such as skits, dramas, health parades, physical demonstrations, film-shows on health topics etc. A team of experts on health including officers from the Central Bureau of Health Education and the Inspecting Staff of the Delhi Education Department, visited the schools and made suggestions for the improvement of health practices.

Vocation of a Housewife

Under the joint auspices of *the Department of Extension Services, S. T. College, Bombay,* and the Institute of Vocational Guidance, Bombay, a seminar on the "Vocation of a Housewife" was held for two days. The participants discussed such topics as entering the vocation—choosing a partner for life, the woman as a mother, wife and hostess; and domestic duties of married life such as cooking and sewing etc. Eighty career masters working in different schools attended the seminar.

Action Research

Under the guidance of *the Department of Extension Services, A. G. Teachers' College, Ahmedabad,* a group of schools has been working on experimental projects. The Co-ordinator held three meetings

with this group, and as a result of the discussions, these schools have agreed to take up action research on a number of problems which are listed below:—

(1) How to improve pupils' handwriting and spelling.

(2) How to make pupils experiment-minded in subjects like General Science.

(3) How to give effective learning experiences through group-discussions

(4) How to utilise fruitfully the school broadcast.

(5) How to develop a critical attitude in pupils at the secondary school stage

(6) How best the objective-centred teaching can be implemented in the actual classroom work.

(7) How to conduct a special course in speech training in Gujerati for the secondary school pupils.

(8) How best parents' co-operation can be developed to further their children's progress in school.

(9) How to develop creative ability in pupils.

Publications

October-November, 1960

Name of the Extension Department	*Name of the Publication*
1. B. R. College of Education, Agra.	(a) Quarterly newsletter. (b) A brochure on English pronunciation, stress, pitch, juncture and intonation for teachers of English.
2. Teachers' Training College, Bhagalpur.	Hindi Shikshakon ki Samasyayen, Samadhan aur Yojanayen.
3 Secondary Training College, Bombay.	A report of the seminar on the teaching of Hindi in Secondary Schools.
4. Institute of Education for Women, Alipore, Calcutta.	October Number of the 'Sravani.'
5. David Hare Training College, Calcutta.	A report of the Short Course on the Structural Approach to the Teaching of English.
6. Government Post-Graduate Basic Training College, Chandigarh.	'To Teachers' by Pt Amarnath Vidyalankar.
7 R. N. Training College, Cuttack.	A report of the Career Masters' Training Course

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DA 60/624

Analysis of School Examination Results of March, 1960

The Central Examination Unit of the D.E.P.S.E., made a study of the results of the Secondary School Examinations held in March, 1959 *and* 1960. *Below are given their findings.*

—Editor

The All India Council for Secondary Education at its first meeting held in July, 1959 considered at great length the problem of the large number of failures at the Secondary School Examination every year and suggested certain remedies. Following the recommendations of the Council the Central Examination Unit made a study of the results of the secondary school examinations held in March, 1959 and located factors which seem to contribute to these failures. The findings of this study were placed before the third conference of Secretaries of Boards in September, 1959. The conference made several recommendations and suggestions to improve the situation. These recommendations were forwarded to the Boards of Secondary Education for such action as was possible. The Central Examination Unit followed the previous studies with an analysis of the results of the examination held in March, 1960 in order to see whether any improvement had been effected or not. Data were, therefore, collected from the Boards on such aspects of the examination as the number of regular, private candidates who appeared at the high and higher secondary school examinations; the total number passed, both regular and private; the pass corresponding percentages and the pass percentage in English and in Mathematics.

The data thus obtained were analysed and classified under the following heads:

1. An over-all view of the results of all the Boards together.
2. Pass percentage of regular high school candidates.
3. Pass percentage of regular higher secondary school candidates.
4. Pass percentage of private high school candidates.
5. Pass percentage of private higher secondary school candidates.
6. Performance of pupils in English and Mathematics.

I. Analysis of Results

In the high and higher secondary school examinations held by the 18 Boards and Universities in the country, 10,76,660 students appeared. Out of these 5,42,578 pupils or 50.4 per cent were declared successful. The following tables give further details about the pass percentage of the regular and private candidates, separately for the high and higher secondary school examinations.

TABLE I

A. High School Examinations

	Appeared	Passed	Percentage Passed
Regular Candidates	620,134	351,725	56·72
Private Candidates	296,180	115,147	38·87
Total ..	916,314	466,872	50·95

B. Higher Secondary School Examinations

	Appeared	Passed	Percentage Passed
Regular Candidates	124,720	64,974	52·10
Private Candidates	35,626	10,732	30·10
Total ..	160,346	75,706	47·21

C. Grand Total (High+Higher Secondary Examinations)

	Appeared	Passed	Percentage Passed
Regular Candidates	744,854	416,699	55·94
Private Candidates	331,806	125,879	37·93
Total ..	1,076,660	542,578	50·4

The above table shows that the over-all pass percentage of regular candidates is much higher than that of private candidates in each case. The results of the candidates of both the categories put together show a drop in the pass percentage of 6 to 7 per cent. Of the total number of candidates taking the high and higher secondary school examinations private candidates are seen to constitute nearly 33 and 22 per cent respectively. It would, therefore appear necessary to impose some restriction on the growing numbers of private candidates and to check the tendency of students appearing as private candidates.

The average pass percentage of the secondary school examination during the First Five-Year Plan was about 47.5. In 1959 it was about 47 per cent. Compared to these percentages the result of 50.4 per cent in 1960 presents a slightly brighter picture. The comparative percentages for regular candidates of high and higher secondary schools are 56.72 and 52.10 respectively and are even more encouraging.

II. Performance of Regular High School Students

Table II gives the Board-wise figures of regular high school candidates who appeared and passed in the examination of March, 1960. The percentage of passes ranges from 27.50 to 73.

TABLE II

Sr. No.	Name of Board/University	Appeared	Passed	Percentage Passed
1	Board of Secondary Education, Hyderabad			
	(i) S.S.L.C.	34,878	12,901	37
	(ii) H.S C. (Telenga area) ..	10,708	4,040	37·7
2	Bihar School Exam. Board, Patna ..	56,117	34,475	61·4
3	Board of Secondary Education, Madhya Pradesh Sub-Office, Gwalior	12,993	5,503	43·1
4	Secondary School Certificate Exam. Board, Poona			
	(i) Secondary School Certificate ..	[illegible],806	55,575	49·71
	(ii) H S.C. (Marathwada) ..	5.501	1,513	27·50
5	Board of Public Exam., Trivandrum	58,184	22,049	37·9
6	Board of Secondary Education, Madras	51,774	27,004	52·1
7	Board of Secondary Education (Multipurpose), Jabalpur	1,554	1,132	73·3
8	Vidharba Board of Secondary Education, Nagpur	15,193	7,968	52·44
9	Board of Secondary Education, Bangalore			
	(i) High School (S.S.L.C. Examination), Mysore Area ..	22,686	13,368	58·9
	(ii) S.S C. (Bombay Karnatak) ..	11.008	5,749	52·1
	(iii) S S.L C. (Madras Karnatak)	4,493	3,003	66·7
10	Board of Secondary Education, Orissa, Cuttack	6,971	4,800	68·9
11	Board of Secondary Education, Rajasthan, Jaipur	20.845	11,267	54·0
12	Board of Secondary Education, West Bengal, Calcutta	48,077	22,077	40·5
13	Board of Higher Secondary & Intermediate Education, Allahabad ..	1,68,[illegible]24	70,539	41·8
14	Punjab University, Chandigarh ..	52,105	34,190	65·6
15	Aligarh University	221	164	52·1
16	Board of Secondary Education, Delhi	4,617	2,745	62·1
17	Gauhati University	14,950	7,712	51·6
18	University of Jammu & Kashmir ..	6,803	3,951	58·1

The following table indicates the frequency of examinations falling within different ranges of pass percentages.

TABLE III

Pass percentage	Examinations
Less than 50	8
50 to 60	8
Above 60 to 70	5
Above 70	1

Eighteen Boards and Universities conducted 22 examinations for the regular high school students. Table III shows very clearly that if 70 per cent were fixed as the first target to be obtained in the improvement of results then practically every Board has yet to reach this standard Even 60 per cent as a target will find 16 Boards below the mark, and 8 Boards very much below the level. These 16 Boards examine a large majority of students and therefore, concerted efforts are obviously required to improve the standard without delay.

III. Performance of Regular Higher Secondary Candidates

Table IV gives the pass percentages of regular higher secondary students in 21 different examinations conducted by 18 Boards and one University.

TABLE IV

Pass Percentages of Regular Higher Secondary Candidates

Sr. No.	Name of Board/University	Appeared	Passed	Percentage Passed
1	Board of Secondary Education. Hyderabad			
	(i) H S. and (Multipurpose) ..	1,077	299	28 00
	(ii) H.S. (Multipurpose).. ..	2,757	1,250	45·00
2	Bihar School Examination Board, Patna	188	113	60·1
3	Board of Secondary Education, Madhya Pradesh Sub-office, Gwalior ..	6,794	,924	37·5
4	Secondary School Certificate Examination Board, Poona	837	309	36 92
5	Board of Secondary Education (Multipurpose) Jabalpur			
	(i) A-Course Multipurpose Higher Secondary Examination ..	2,101	1,810	86 14
	(ii) (Agr.) H. S. Course	55	50	90·90

TABLE IV—*contd.*

Sr. No.	Name of Board, University	Appeared	Passed	Percentage Passed
	(*iii*) B-Course Pre-University H.S.	1,073	401	37·29
	(*iv*) B-Course Pre-University H.S. Arts Course	2,247	1,129	50·02
	(*v*) B-Course Pre-University H.S. Commerce	232	113	48·08
	(*vi*) Kala Niketan (T) H.S. ..	58	40	69·00
6	Vidharba Board of Secondary Education, Nagpur	777	529	69·03
7	Board of Secondary Education, Bangalore H.S. (Hyderabad), Karnatak	1,999	667	33·4
	(*ii*) H.S. (Hyderabad-Karnatak) Multipurpose	884	216	24·2
	(*iii*) H.S. (Coorg)	133	61	45·1
8	Board of Secondary Education, Rajasthan, Jaipur	5,685	2,296	40·4
9	Board of Secondary Education, West Bengal, Calcutta	10,061	6,226	61·8
10	Board of H.S. and Intermediate Education, Allahabad	70,037	31,642	45·18
11	Punjab University, Chandigarh ..	10,862	10,259	94·45
12	Board of Secondary Education, Delhi	6,277	4,333	69·00
13	University of Jammu and Kashmir ..	581	307	52·8

The results shown in Table IV are seen to be not very different from those of regular high school students. The percentage ranges between 24.2 and 90.90. The results in Punjab are even higher, namely 94.45 but this represents the core subjects only. The results of the other 20 examinations fall under the following levels of range:

TABLE V

Pass percentage	Examinations
Below 40	6
Above 40 to 50	5
Above 50 to 60	2
Above 60 to 70	5
Above 70	2

It is, thus, seen that the range of pass percentage in respect of regular higher secondary candidates is very wide. Six Boards fall below 40 per cent while 5 fall between 40 and 50 and another 5 between 60 and 70. This phenomenon would appear to require further investigation regarding course content, difficulty of question papers, scoring procedures and the pass levels of different boards.

IV. Performance of Private High School Candidates

The Board-wise picture of the performance of private high school candidates is shown in Table VI.

TABLE VI

Pass Percentages of Private High School Candidates

Sr. No.	Name of Board/University	Appeared	Passed	Percentage Passed
1	Board of Sedcondary Education, Hyderabad			
	(i) S.S.L C.	5,768	1,279	22·6
	(ii) H.S.C. (Telengana area) ..	6,752	1,247	18·48
2	Bihar School Examination Board, Patna	30,993	14,491	46·7
3	Board of Secondary Education, Madhya Pradesh Sub-Office, Gwalior	13,213	3,044	23·03
4	Secondary School Certificate Examination Board, Poona			
	(i) S.S C.	8,738	1,407	16·10
	(ii) H S.C. (Marathwada) ..	963	374	38·84
5	Board of Public Examination, Trivandrum	22,086	6,553	29·6
6	Board of Secondary Education, Madras	3,017	462	15·3
7	Board of Secondary Education (Multipurpose), Jabalpur	1,649	466	28 2
8	Vidharba Board of Secondary Education, Nagpur	5,337	1,858	34 83
9	Board of Secondary Education, Bangalore			
	(i) High School (S.S.L.C. Ex., Mysore area)	6,109	2,985	48·8
	(ii) S.S.C. (Bombay Karnatak) ..	1,212	350	46·2
	(iii) S.S.L.C. (Madras Karnatak)	448	48	10·7
10	Board of Secondary Education, Rajasthan Jaipur . ..	17,832	5,399	30 2

TABLE VI—*contd.*

Sr. No.	Name of Board/University	Appeared	Passed	Percentage Passed
11	Board of Secondary Education, Orissa, Cuttack	4,026	1,176	29·3
12	Board of Secondary Education, West Bengal, Calcutta .. .	52,812	10,686	25·1
13	Board of H S. & Intermediate Education, Allahabad .. .	44,729	12,442	27·8
14	Punjab University, Chandigarh	58,770	17,501	29 7
15	Aligarh University, Aligarh ..	583	304	52 1
16	Board of Secondary Education, Delhi	183	80	43 7
17	Gauhati University, Gauhati .	8,371	2,331	27 8
18	University of Jammu and Kashmir .	2,741	664	24·4

In the pass percentages that range from 10.7 to 52.1 of the 22 examination results in this table, only one is above 50 per cent as against 14 in the case of regular high school candidates.

V. Performance of Private Higher Secondary Candidates

Table VII gives the pass percentages of private candidates who took the higher secondary examination in different Boards during March, 1960.

TABLE VII

Pass Percentages of Private Higher Secondary Candidates

Sr. No.	Name of Board/University	Appeared	Passed	Percentage Passed
1	Board of Secondary Education, Hyderabad			
	(i) H S.C (Telengana area)	6,752	1,247	18 48
	(ii) H.S M P School Leaving Certificate (Telengana Area)	698	185	26·4
2	Board of Secondary Education, Madhya Pradesh, Sub-office, Gwalior	161	59	36·6

TABLE VII—*contd.*

Sr. No.	Name of Board University	Appeared	Passed	Percentage Passed
3	Board of Secondary Education (Multi-purpose), Jabalpur			
	(i) A-Course M P.H.S Examination	37	21	56 76
	(ii) Agri. H S. Course .. .	2	1	50·00
	(iii) B-Course Pre-University H.S. Course . ..	55	22	40 00
	(iv) B-Course Pre-University H.S. Arts Course . . .	264	135	51·14
	(v) B-Course Pre-University H S. Commerce	11	6	54 50
4	Vidharba Board of Secondary Education, Nagpur . .	100	22	22·00
5	Board of Secondary Education Bangalore			
	(i) H.S. (Hyderabad Karnatak) ..	1,226	380	29·3
	(ii) H.S. (Hyderabad Karnatak) Multipurpose . ..	231	31	10·7
6	Board of Secondary Education, Rajasthan. Jaipur . ..	669	267	39 91
7	Board of H.S & Intermediate Education, Allahabad . .	25,001	8,170	32·67
8	Board of Secondary Education, Delhi	369	186	50 4

The results of this category of candidates range between 10.7 to 56.75 per cent Although in the case of 4 out of 14 examinations the percentage is above 50 the point loses significance when the actual number involved is considered. For example, in one examination, only 2 candidates appeared of which 1 passed while in another 11 appeared and 6 passed. Even in the case of the examination where the pass percentage is the highest, only 37 candidates appeared. Another interesting point is that out of 35,626 candidates who appeared privately in all the eight Boards, as many as 25,001 belong to one Board Consequently the pass percentage of this Board (32.67) has become the determining factor of the total pass percentage (30 10). When the position is reviewed after excluding that Board, the average pass percentage of the remaining Boards drops down to 25. This would seem to indicate that it is more difficult for private candidates to pass the higher secondary examination than the high school examination.

VI. Performance of pupils in English and Mathematics

Table VIII shows the Board-wise pass percentages in English and Mathematics of regular and private candidates who appeared in the high and higher secondary school examinations.

TABLE VIII

Pass Percentage in English and Mathematics

Sr. No.	Name of Board/ University	Name of Examination	Percentage of passes in English Regular/ Private		Percentage of passes in Mathematics Regular/Private	
			Reg.	Pri.	Reg.	Pri.
1	Board of Secondary Education, Hyderabad.	(*i*) S.S.L.C. High School	46	34	67	55
		(*ii*) H.S. & M. P. School Leaving Certificate ..	31	—	53	—
		(*iii*) H.S.C. (Telengana Area)	35·4	14·8	60·9	36·8
		(*iv*) H.S.M.P. School Leaving Certificate (Telengana Area) ..	36·9	11·1	85·7	35·2
2	Bihar School Examination Board, Patna.	(*i*) Higher Secondary..		71·8	Elementary	64·3
		(*ii*) High School ..		Advance Maths. Ele. Maths. Adv. Maths.		86·1 78·0 77·6
3	Board of Sec. Education, Madhya Pradesh, Gwalior.	(*i*) High School ..	51·85	23·85	79·82	54·02
		(*ii*) Higher Secondary School	59·75	38·1	55·04	51·14
4	Secondary School Certificate Examination Board, Poona.	S.S.C.	Lower level Higher Elem. Aleg. Arith. 42·76 76·40 71·65 76·40 43·69 (Regular & Private both)			
		H S.C. (Marathwada) ..	22·06	(R&P)	38·78	(R&P)
		H.S.M.P. School Certificate Examination Board, Poona ..	36·46 (R&P)		67·27 (R&P)	
5	Board of Public Examination, Trivandrum.	High School	—	—	—	—
6	Board of Sec. Educ., Madras.	S.S L.C.	40	42	(42 composite State average Maths)	

TABLE VIII—*contd.*

Sr. No.	Name of Board/ University	Name of Examination	Percentage of passes in English Regular/ Private		Percentage of passes in Mathematics Regular/Private	
			Reg.	Pri	Reg.	Pri
7	Board of Secondary (Multipurpose) Education, Jabalpur.	(*i*) A-Course M.P.H.S. Examination ..	89·44	82·75	81·22	76·92
		(*ii*) Agr. H.S. Course ..	75	50	80	50
		(*iii*) 2 year high School Course	70·61	32·07	88·97	59·65
		(*iv*) B-Course Pre-University H.S. Course	63·41	72·22	45·83	30·30
		(*v*) B-Course Pre-University H.S. Course	46·21	52·65	—	—
		(*vi*) B-Course Pre-University H.S. Commerce	58·69	62 05	—	—
		(*vii*) Kala Niketan (T) H.S.	55·02	—	85·05	—
8	Vidharba Board of Secondary Education, Nagpur	(*i*) High School ..	65	51 5	61·7	42·9
		(*ii*) H.S. School ..	68	31·32	79	25·71
9	Board of Secondary Educ., Bangalore.	(*i*) High School ..	61·4	53·6	80·2	72 8
		S.S.L.C. Ex-Mysore area) S.S.C. Bombay Karnatak) ..	49·9	38·2	72·7	38·9
		S.S L C. Madras Karnatak)	63·4	16·3	49·1	14·0
		(*ii*) Higher Secondary (Hyderabad Karnatak)	28·0	27·1	46 3	46·6
		Higher Secondary (Hyderabad Karnatak Multipurpose) ..	34·2	46·6	66 4	59·9
		Higher Secondary (Coorg)	58·6 (64)		82 0 (46)	—
10	Board of Secondary Education, Orissa, Cuttack.	High School	48·5	15·5	60·5	24·2

TABLE VIII—*contd.*

Sr. No.	Name of Board/ University	Name of Examination	Percentage of passes in English Regular/ Private		Percentage of passes in Mathematics Regular Private	
			Reg.	Pri	Reg.	Pri
11	Board of Secondary Education, Rajasthan.	High School	64·29	43·92	86·74	55·75
						Opt.
		School Opt. . ..	61 39	44·79	72·62	63·68
		H.S Comp	36 46	32 47	..	..
		School Opt .. .	74 45	75 00	51·96	49·02
12	Board of Secondary Education, West Bengal, Calcutta	High School	43·1	30·94	74·2	67 3
		Higher Sec. School ..	74·4	..	81·5	..
13	Board of H S. & Intermediate Education, Allahabad.		E.I.	II	I	II
		High School	52 2	42·4	69·7	50 9
		Intermediate (Higher Sec.)	48·6	54·79	56·7	36·3
14	Punjab University, Chandigarh.	High School	73·2	39·8	73·2	48·2
			H.H. & Arith		87·3	54·1
		Higher Secondary School Core Subjects.	82 38		95·86	
15	Aligarh University, Aligarh.	High School ..	74·2	52·1	81·9	55·0
16	Board of Secondary Education, Delhi.	High School	64·3	53·6	69·3	60·6
		Higher Sec. School ..	77 8	58·6	85·7	69
17	Gauhati University, Gauhati.		39·6	18·00	56·00	20·00
18	University of Jammu and Kashmir.	High School	80·8	53·2	62·0	51·8
		Higher Sec. School ..	64·7	..	88 8	..

It is observed that the pass percentage in English and Mathematics is better in the case of regular candidates than in the case of private candidates. Again the performance of higher secondary school students is generally superior to that of the high school pupils. It is also seen that the performance in Mathematics is generally better than in English when the results in English are compared with the corresponding overall results given earlier in different tables. It will be observed that the results in English maintain a close parallel with the over-all pass percentage of any examination. This would seem to support our previous observations that English is the sole factor in deciding the pass or failure of a candidate in the entire examination.

Summary

1. The over-all percentage of 1960 registers a slight improvement over that of the previous years The improvement is, however, not very significant and more intensive efforts are necessary to ensure further improvement.

2. The practice of declaring results of regular and private candidates separately has helped in developing a more realistic picture of examination results.

3. It is generally more difficult for a private candidate to pass the higher secondary examination than the high school examination.

4. The success or failure of a pupil is largely determined by his success or failure in English. Urgent and intensive measures are, therefore, necessary to bring about improvement in this subject in an effort to improve the general results.

5. Mathematics does not seem to be as much responsible as English in deciding the incidence of failures.

Studies on Internal Assessment

Relationship between Objectives and Assessment in Secondary Education

The Central Examination Unit undertook the survey of the progress made by the State Boards of Secondary Education with regard to the introduction of the system of internal assessment, and the analysis of the strength and weakness of the present practice. The Evaluation Officers of the D.E.P.S.E., who conducted this survey, visited the Boards of Secondary Education and the Education Departments of some of the States, had discussions with headmasters, teachers and educational officers, and interviewed some pupils of secondary schools, in order to collect first-hand information for their purpose. Dr. F. M. Fletcher, T.C.M., Consultant to D.E.P.S.E., assisted these officers in organising and completing this study.

The various factors involved in internal assessment and the practical difficulties in the process were examined carefully during the course of the investigation. It was felt necessary to clarify the concept of internal assessment. The study of this problem was divided into two parts, the first dealing with the theoretical aspect and objectives of the subject, and the second, with a survey of the current trends in education. In this issue only the first part is published.

—Editor

A successful system of educational assessment should help to find out how far the objectives of education have been realised as a result of a particular course of instruction. Therefore, while considering the desirability or possibility of internal assessment, it would be worth-while to consider the major objectives of secondary education and to examine how far our present system helps to meet those requirements and, if not, what additional means are necessary to strengthen it so as to give a comprehensive picture of the student's total attainment. Listed below are what may be considered to be the broad objectives of secondary education.

To develop—

(1) the ability to understand the spoken and written word;

(2) the ability to effectively express, orally and in writing;

(3) skill in intensive and extensive reading;

(4) the power of critical thinking, logical reasoning and interpretation;

(5) knowledge and understanding of subject matter;

(6) the ability to apply knowledge to new, unique and everyday situations;

(7) adequate motivating factors and interests and an integrated set of values;

(8) physical fitness and healthy habits;

(9) the capacity to make decisions regarding one's vocation;

(10) certain essential skills such as constructional, practical and drawing skills;

(11) resourcefulness, creativity and initiative;

(12) desirable attitudes and appreciations;

(13) mental health;

(14) desirable personal and social qualities.

Once these objectives or their derivatives are accepted, the next step is to evolve a suitable system of assessment which would effectively appraise the pupils' attainments in the direction laid out by the objectives. The existing system of examinations does not measure more than the first six objectives in the above list, and even within this limited range it is found inadequate for objectives such as skill in reading, oral expression, critical thinking and expression. The reason for this neglect is not that the objectives are not considered important, but that they require techniques and evaluation tools which cannot be applied easily, especially, where it involves a large number of students. In fact, the oral and practical tests which were administered in the past at the external assessment in some of the States had to be given up because of administrative difficulties, yet these techniques and a variety of others which have been tried in other countries have distinct possibilities for assessment in areas which have not yet been touched by the external examination.

The two most important criteria of a good examination are—validity and reliability. Examinations have to serve a very specific purpose and should be valid for that purpose. The existing system of external examinations not only fails to cover all the areas of assessment but is also questionable in respect of the validity of questions which it employs for these areas. Equally important is the question of reliability. The external examination is administered only once and cannot, therefore, be considered to be very reliable measure. It is exposed to chance and luck both of which are repeated criticisms against it. This defect could be obviated only when we can assess the pupils' academic attainments continuously on several occasions and find out what kind of an over-all picture such a continuous appraisal gives.

The fact that it cannot be done by a system of external examination is obvious. It does, however, point to the need for a more frequent assessment of pupils' achievement. This could be done if schools made internal assessments of pupils' achievements, and took them into account in determining the progress of a pupil at any given stage. This brings us to the need for internal assessment.

The Need for Internal Assessment

As we have just explained, external examination is inadequate as one single instrument of evaluation of the all round development of pupils. In fact, internal assessment owes its origin to the growing anxiety that external examinations pass a final and irrevocable verdict on a pupil's academic standing on the basis of a single evaluation. Some of the reasons that bring out the need for a system of continuous and comprehensive internal assessment, are given below.

1. External examinations provide only a limited number of testing opportunities. Internal assessment as a corrective to this drawback, provides a varied and large number of testing opportunities.

2. Internal assessment is spread over the entire period of the pupil's learning and is based on cumulative records. It, is, therefore, likely to give more reliable results than the single external examination.

3. Internal assessment is the only appropriate means of evaluating practical skills and abilities which can be tested in everyday situations rather than in paper and pencil tests.

4. Even in the case of testing certain achievements such as ability to apply knowledge in new situations, internal assessment serves better than external examination as the former gives enough scope to present a variety of such situations to the pupils more frequently and in a natural setting.

5. Many aspects of personality traits such as character, values, motivating interests and appreciations which cannot be tested by the external assessment, are within the reach of internal assessment.

It can, therefore, be stated that even if internal assessment cannot completely *substitute* external examination in the immediate future, it does have an admirable capacity to *supplement* it by lending a variety of testing situations and thus help in making evaluation more comprehensive and meaningful.

The Concept of Internal Assessment

Internal assessment is so differently understood and interpreted that it would appear desirable at this stage to make a brief review of the varying points of view on the subject.

1. One point of view includes all the marks of weekly, monthly, quarterly and half-yearly examinations in internal assessment and the achievement at the annual examination in external evaluation. The yearly examination is regarded as a spring board for promotion.

which is thus the only criterion for terming assessment as external or internal. To those who hold this view, there is no difference between an annual examination conducted by the school and that conducted by a Board or University, since the courses in both these types lead to "Promotion".

2. A second view, only slightly different from the first, considers internal assessment to be those evaluations which are made by the school for its own pupils at all its examinations; results of other examinations conducted by outside agencies are defined as external assessment. This view takes the *agency* sponsoring the examination as the criterion which decides whether an evaluation is internal or external. According to the adherents of this view, the school is the only agency which can make internal assessment.

3. A third point of view considers evaluation of academic achievement which is made in the class as internal assessment; and ranks and distinctions in outdoor activities, as external assessment. The criterion in this case lays emphasis on the *place of the acquired achievement.* Outcomes of education brought about in the classroom come under internal assessment and acquisitions made *outside* the classroom are brought under external assessment. It may however, be pointed out that this view has only an insignificant minority to advocate it.

4. Yet another large group of educationists consider that internal assessment is concerned with the over-all annual *academic* achievement and is not concerned with co-curricular and extra-curricular activities. This group inclines to think of cumulative records as an additional means of evaluation, with a distinct sphere of operation apart from the external and internal assessment. The record and assessment of what they consider to be unacademic and outside class outcomes of education, are considered to be the function of cumulative records. These records are, however, conceived as pertinent only to the assessment of that part of learning which falls outside the purview of internal and external examinations. Thus the recorded proofs of achievement and the evaluation based on them are equated to other means of evaluation.

5. The viewpoint which is academically and educationally considered to be the most sound, is that evaluation to be called internal should be made by that teacher who has taught that content area to the pupil. An extreme interpretation of this definition might make even the periodical school examinations, in which papers are set by teachers *other than those teaching that subject,* come under the category of external assessments. The main point in this view, which is worthy of note, is that whether an assessment is in the field of an academic or non-academic subject, whether it is through a written test or a judgement or rating of the pupil's activity, whether it be for purposes of annual examination or a monthly or terminal examination, it is internal assessment, provided it is done by the teacher or teachers who have been in contact with the students and guided them in their progress.

The Boards of Secondary Education in the country which have begun to give weightage to internal assessment in their external examinations, seem to adopt this view, although in some cases, they have left it to the schools to determine the criteria on which to base internal assessments.

General Principles Relating to Internal Assessment

One of the essential requirements of internal assessment, is therefore, that it is the function of the educator or the teacher. This principle must be accepted if assessments are to be valid. It is only the teacher who knows how a course has been covered, what emphasis he has given while covering the course and what progress has been made by the pupils. It is he who has helped in the development of abilities, skills, interests and attitudes in pupil's through his teaching. An outsider, however careful his assessment may be, is never able to give the same emphasis while testing the group of boys as the teacher can. It is obvious, therefore, that the appraisals made by the teacher are the most valid for evaluating the purposes he had in mind while teaching the subject.

Helping the Achievement of Educational Objectives

Another fundamental principle on which internal assessment is based, is that assessment is for the improvement of the whole educational process. External examinations may have uniformity of standards which cannot be claimed in equal degree for internal assessment. The primary objective of internal assessment is, however, not to level out standards but to ensure the achievement of the objectives of education. Assessment is a process which is designed to diagnose pupil's difficulties and thereby guide them in making further progress and achieving higher goals.

Internal assessment is also of value to the teacher because it helps him see how effective or ineffective a plan of action has been in attaining specific objectives. Assessment of pupils' progress towards desirable goals indicates the possibilities and difficulties inherent in certain approaches. On the basis of this experience, the teacher is able to plan his work better. Internal assessment also enables the teacher to appraise a prescribed course or a text book in the light of desired objectives. It is this kind of assessment which can help to make the teaching programme more effective and suited to the purposes of education. When the attainment of educational objectives becomes the main target of an assessment system, more frequent and valid assessments follow as corollaries. The educator has to assess the gains of his pupils from time to time and from stage to stage, so as to be able to give the best type of guidance to his pupils.

Individual Differences

The very nature of internal assessment makes it possible for the teacher to take into full account the individual differences among his pupils. While the external examination may ensure uniformity of standards, it will not certainly be able to measure or even recognize

the uniqueness of the individual child. No two children are alike and what is considered the weak point in one child, may be strength in another. In fact, the best education is that which adjusts itself to the child. An external examination may prove favourable to the student because it gives importance to those areas in which he happens to be strong, whereas it is unfavourable to another whose assets it ignores.

There is a further educational value to internal assessment, namely, that it covers a wide field of educational objectives, taking into consideration personal habits, likes and dislikes, attitudes and personal traits of the individual pupil. Knowledge about these qualities will be useful from the point of view of the future of the child, in making appraisals of the personal aspects of his growth or in helping him with crucial decisions or about a further course or career. Hence, the additional data which internal assessment will provide, which do not fall within the purview of the external examination, will make it possible for students to be channelised into appropriate lines of work suited to their inclinations. In this sense, internal assessment contributes to the individual's happy adjustment to life.

The Nature of Tools

As the purpose and scope of internal assessment are different from those of the external examination, there is consequently a difference in the techniques and tools, used for internal assessment. The external examination keeps confined to the rather formal tools of testing, whereas internal assessment uses a wider variety of tools, both formal and informal, to suit the wider scope of educational objectives which it measures. Its scope even extends to the less tangible objectives of education, and therefore the judgements and appraisals of the teacher find a greater place in comprehensive schemes of internal assessment. The teacher's observation, both in controlled and uncontrolled situations, becomes the basis of pupils' ratings on various attainments and characteristics. The use of tools and techniques such as oral tests, questionnaires, inventions and checklists, interviews and role playing, finds a prominent place in the assessment of pupil's interests, attitudes, personality characteristics and motivational aspects. These techniques being of a subjective nature, present the problems of how to arrive at reliable and objective judgements, and how to record, organise and interpret, results. As internal assessment lays considerable stress on the *use* of test results and not merely on collecting them, the organisation and interpretation of evidence collected through diverse means becomes a matter of vital importance.

Internal Assessment and the Responsibility of Teacher

A consideration of the possibilities of internal assessment as a means of grading, selecting and improving standards of education brings up another important question—the responsibilities that such an approach throws on the classroom teacher as assessor of the pupil's achievement. In order to be able to use internal assessment correctly

and justly, the teacher should be familiar with the necessary techniques and procedures and should gain full control and confidence in their use. Therefore, to introduce and practice internal assessment requires a major effort in the matter of training teachers in its techniques and problems. Considering the large number of secondary school teachers in the Country, such an effort will have to be extended over a long period, and will also, require a large army of trained personnel who can assist the teachers in gaining understanding and skills in adapting the various techniques. Adequate preparation of the teacher is thus an important pre-requisite to the introduction of internal assessment practices. Even more important than mastery of techniques, is the need for the teacher to develop understanding and appreciation of the concept and philosophy underlying internal assessment. Only so will the real purpose of the reform be served.

Flexibility of Standards

The passing mark in external examinations, such as 33 per cent is just an arbitrary point. Even in the examinations conducted by the Boards, whenever the percentage of passes is rather low, the passing mark in a subject may have to be adjusted to some extent so that the final result may not be affected too adversely. In fact, the fixing of a passing mark in a subject, depends upon several factors and may have to be adjusted to some extent so that the final result may not be affected too adversely. If an examination is being used for selecting entrants to a particular job or situation, the critical mark will be governed by the number of people to be selected and the number available for selection. If the supply position is not too easy, the qualifying mark may be fixed at a generously low level, whereas if there is no dearth of persons from whom selection is possible, the mark is fixed relatively high. Closely similar is the case with regard to the selection of students to college or to other courses, where the qualifying marks are controlled by the number of entrants and the seats to be offered. There is thus no absolute value to a particular passing or qualifying mark.

Education which extends to and embraces all strata of society demands flexible and even multiple standards of attainment. Universal education at the primary level, implies that every child has to take that much education and develop his potentialities to the maximum. At the end of class VIII, assessment should assist in diverting children along the different streams and perhaps even help some in entering job situations according to their abilities and aptitudes. A child may be required to repeat a class only if it is found that, due to some reason, he could not gain sufficiently from a particular course and that sending him to the next class will not be in his own interest. Therefore, in the frame work of universal education, while we may try to push the standards to the highest point in the case of the brighter pupils, we should be satisfied with reasonably acceptable standards for the general mass of pupils. This ideology with regard to assessment and promotion, if accepted, can be exercised better under

a system of internal assessment than in external examination. In the present system, the external examination has so influenced even the home examination that rules are rigidly applied and mechanically interpreted without taking individual needs and circumstances into consideration.

It may be feared that substituting internal assessment for the external examination might result in a slackening of effort on the part of teachers to take the best educational care of the pupils in their charge. This is a possible and perhaps even grave danger and would have to be guarded against by proper systems of controls and checks.

Examination and Selection

Another function which the external examination at the secondary level is supposed to perform, besides maintaining standards, is that of selection to college or professional courses. It is a subject for study as to how well the external examinations predict college success. The experience of other countries, on this point, goes to show that achievement tests do not predict as well, as aptitude tests. In India, the results of the single examination are also not likely to be so reliable, which makes their prediction value of a doubtful nature. Tests and procedures of internal assessment, on the other hand, are applied more frequently and cover a wider range of objectives. Predictions flowing out of such a continuous and comprehensive system of appraisal are likely to be more meaningful and dependable.

Some Reflections on 'Teacher Education

H. B. Mukherjee

The following broad observations are based on the experience of teacher-training within the framework laid down by the Department of Education, Uttar Pradesh, for the post-graduate L.T. Diploma. The first part of this article by Shri H. B. Mukherjee, Assistant Professor in Education, D.S. Teachers' College, Aligarh, has been slightly abridged. The author considers methods of tackling the problem of teacher-training in the context of the poor raw material of the training colleges today,—which consists mostly of third-class graduates, chiefly in Arts and Commerce and a few in Science. Although he has based his comments on the experience of Uttar Pradesh, his remarks may have a bearing on the principle and practice of guidance obtaining in most parts of the country.

—Editor

Sacrifice of Quality

The poorer stuff, frankly, has to be admitted if training colleges are to run at all, simply because the teaching profession as yet does not attract the better ones. Moreover, the nation is already short of trained teachers, and with the inevitable expansion of education in our developing country the shortage will be increasingly greater. Restricting admission of the superior elements among the prospective trainees alone, will therefore, be neither appreciated nor allowed by the authorities or the public at large. Quality, therefore, will have to be sacrificed at the alter of quantity, at least for some time to come, till we have suitable material in sufficient members as a result of the over-all improvement of the educational apparatus as well as of the prospects of the teaching profession in our country. Meanwhile, everything should be done to ensure the best possible recruitment under the present limitations. Notwithstanding the shortcomings and inadequacies of aptitude tests, the most reliable of them should be selected and administered to find the genuine article. An inner fitness for the teaching profession is much more important than any other comparatively superficial attainment. Unwholesome pressure or canvassing must be resisted and in this respect the controlling authorities should extend all assistance. Stipends and fee-concessions should be provided to the maximum extent to encourage really deserving candidates; and in this matter state-aid must be generously forthcoming. Uttar Pradesh has recently taken some commendable

measures in this direction. It is understood that the Union Government is also contemplating a scheme of subsidising teacher-education in the above manner. All this may help in making the best of a bad bargain for the time being.

Numerous Handicaps

So far as the actual training course is concerned, few indeed set much store by it, unless one happens to be either blindly conceited or inanely complacent. A scepticism about its intrinsic worth other than its mercenary value, is widely prevalent alike, among the trainers, trainees and the general public. Two renowned former Principals of two premier training colleges of this country recently confessed to a sense of failure and frustration over their life-long work in training teachers. Painful though these candid revelations are, they are not surprising if one remembers the numerous handicaps under which the training course usually has to be run, apart from the question of the poor equipment of the trainees. Considering the short duration of nine or ten months of the period of training, the syllabus for practical and theoretical examinations falls too heavily on the feeble shoulders of the trainees. It is a hard job even for the most earnest ones, and too hard for the shirkers who conveniently make light of it The guidance received from usually understaffed institutions is often not adequate. The time table is on the whole much too strained to admit of leisurely discussion or individual concentration for specific remedial measures, which must supplement the paper-criticism on the lessons if any substantial improvement in the quality of teaching is to be brought about; for the significant fact always remains that very few are educable to the desirable extent.

Conflict of Precept and Practice

Again the pupil-teacher is accepted by the practising institutions usually on sufference. Nobody takes him seriously or attaches any importance to his work, not even his students. He is asked to, and often made to, follow the usual practice of the school in respect of syllabus, methodology or classroom procedure, which often run counter to his training-college precepts. Apart from the mental conflict that it generates, it definitely retards his progress along the lines prescribed for him by his teachers. The all too vivid realization that what he is laboriously learning in his classroom has no place anywhere outside its four walls, is shatteringly demoralising for him. The reality having thus disappeared from his training-pursuits, he takes to sly makeshift devices to cater to the whims and fancies of all parties concerned, as long as the ordeal lasts. Needless to say, no real learning can take place in such a frame of mind or in such environments.

Defects in Evaluation

The system of examination adopted by the U.P. Education Department also serves to worsen this situation In the practical examination, though the recommendation of the Principal of the training college

is expected to be taken into consideration by the two external examiners, assessment is in practice made by the latter on the basis of the actual performance of the candidates in the final lessons. As no marks are awarded by the teachers concerned for the entire sessional work of the trainees, the momentary impression of the final lessons—which must be superficial even with the most experienced observers—entirely determines judgement: and this fact, obviously, is basically unfair and even harmful. For, the candidate can well afford to depend on his final performance in comparative disregard of his day-to-day work throughout the year. Moreover, it is only the actual teaching that is assessed and not the over-all potentialities of the prospective teacher. Thus a very earnest and well-meaning teacher whose teaching technique is deficient may fare much worse than a clever shirker with superficially impressive qualities. In the final theory examination also, there are no separate marks for sessional work on theory like essays, dissertions, extra readings, performance in the terminal or periodical tests etc This makes it difficult to get the trainees to do any serious academic work that has no direct bearing on the final examination. The final test also has the same drawbacks which similar essay-type tests have elsewhere. The real handicap in all this is that few progressive experiments on teacher-education can be carried out by individual institutions affiliated to the Department, for they possess no apparent examination value and are not likely to be counted by the external examiners. All well-meaning effort leads to the same blind alley, the prescribed examination system; all founder on the same hard rock. It may be noted in this context that the university training departments possess for greater freedom in this matter and can, therefore, be run on more dynamic lines, though they more or less share many of the other difficulties enumerated above.

Possible Remedies

The picture painted above is undoubtedly disheartening. But we really cannot afford to lose heart. In view of the tremendous significance of educational reconstruction in our country, the problem of teacher-education will have to be faced and solved at all cost. Two types of measures may be envisaged for the purpose: short-term and long-term.

Let us consider the short-term measures first. In this respect, the State Department of Education has significant responsibilities to discharge. Controlling as it does both the L.T. Training Colleges and the practising schools, it must address itself to the urgent task of establishing the proper relationship between them through the agency of its inspectorate and directorate. It should persuade the schools to extend to the pupil-teachers the same measure of seriousness and co-operation that they do to their regular teachers, and should arbitrate in cases where the interests of the schools and those of the trainees come into conflict. The most important thing is to see that on the whole good teaching through progressive methods prevails in the schools. Considering the present standards and conditions, it is no doubt a difficult task, but given the proper direction and drive, much can be achieved

by way of creating the proper tone and atmosphere. For this purpose, the State inspectorate should be reoriented, if necessary. Unless this resolute seriousness of approach pervades the average schools, any attempt to inculcate good teaching among the pupil-teachers, will surely prove to be as abortive as it is now. On the other hand, a similar co-ordinated direction should be given to the training colleges to come together from time to time, and compare notes on their actual experience of training against the perspective of the changing conditions of the educational organism as reflected by the day-to-day working of the schools The unfortunate, even tragic, conflict between time-honoured but probably outmoded training college precepts and the actual living school conditions regarding aims, content, methodology and general approach to educational problem, will thus have to be resolved, and a dynamic healthy relationship established between the two by virtue of a sympathetic and realistic approach. It is regrettable that no such machinery exists at present to serve this end. The meeting of the Principals of the L.T. Colleges that does take place at long intervals can rarely go beyond certain immediate problems of administrative significance. The rank and file of the body of teacher-educators find no place in this set up which is thus deprived of the healthy vigorous current of the common stream.

The reorientation of the examination system governing the L.T. college also needs immediate attention. As indicated above, a great deal more of freedom and authority has to be granted to the individual colleges by ear-marking a good percentage of marks for sessional work both in theory and practice, as also for the general conduct of the trainees during the period of training—even at the risk of occasional abuse of this privilege (which, however, can be detected and checked to some degree through suitable safeguards).

From 'Training to Education'

The above short-term reforms and measures can be brought about without much difficulty provided their importance is properly realized by the authorities concerned. But even these are not enough. The most fundamental point that has to be realized is that it is not possible to make good teachers simply through inculcating, even successfully, good methods of teaching. For the obvious truth is there that a teacher is not the methods only, he is a whole man, and this whole man has to be moulded and brought into the desired shape. This is as much a problem with teacher-education as it is with education as a whole. Obviously this is a long-term process. If the proper attitude has to be built and the proper equipments provided, the proper habits inculcated, and the proper spark ignited, it will take considerable time. Much, of course, depends on the toning up of the educational process and the levelling up of standards as a whole. But in teacher-education in particular, the emphasis has to be shifted from 'training' to 'education', from 'methodology' and 'pedagogy' to 'personality' and 'outlook', from a 'vocational preparation' to a 'professional mission'.

Content and Duration of Course

To fulfil this objective, teacher-colleges should run a four-year Degree course on lines somewhat similar to those pertaining to other professional institutions like medical colleges, engineering colleges etc. In these colleges, the teacher-trainees should be admitted after their School Final Examination, and the curriculum should include courses up to the degree standard in the sciences and the humanities commonly taught in the schools, along with the various studies in educational theory which should be compulsory for all. Subsidiary accomplishments like physical training, speech training, blackboard work, art and craft work etc., which are essential for the day-to-day work of a teacher, may be suitably spread over the entire period of training, and should constitute regular examination subjects. Periodical educational excursions and tours should be planned to acquaint the trainees realistically with the needs and problems of our social life and the actual conditions prevailing in our average schools. The trainees should see for themselves some of the significant educational experiments that are being conducted in some progressive schools in the country, and the various aspects of our cultural heritage as a nation. Such things would help to broaden their minds. Some practical work in teaching may be arranged after the course has made substantial headway, to be followed by practical teaching work in a suitable school for an entire academic session as a teacher-apprentice. The entire course leading to a Bachelor's Degree in Education may last for four years in all, so that it does not take more time than now to complete it, (i.e. fifteen years in all).

The Future Teachers' College

Finally, the pattern of life in these teacher-colleges, which must, of course be residential—should be such as to counteract, as far as possible, the unwholesome forces at work in our social life at large, and to make amends for its deficiences and shortcomnigs. The breath of a democratic culture should constantly blow and vitalize their atmosphere. The tone of these colleges should be imperceptibly imbued with the seriousness and sanctity of academic life. Needless to say, high standards should be maintained. At the same time, precautions should be taken to see that the aridity and isolationism of a monastic life do not set in there. These teacher-colleges should be as alive and dynamic as other sister institutions in the country, being vitally linked with the common current of national life. The future teachers are not to be trained up as prospective martyrs to an impending doom, but as the veritable architects of the density of the nation with verve, vitality and vision.

There is nothing either original or utopian in the foregoing description of a future teachers' college. Such colleges with similar programmes of work have been running in various countries in the world for a pretty long time. Even in our country, the former C. T. Colleges training Intermediates for a two-year diploma, showed creditable

results. The above scheme, even if theoretically approved, would obviously involve numerous considerations of a practical nature, of which the financial is naturally the uppermost. It is beyond the scope of this article or the competence of the writer to explore that issue convincingly. These considerations will have to be faced in due course. But in the wake of our gigantic Plans—which are, if not utopian, certainly Herculean in nature—it is by no means an idle pastime to plan heroically for our teacher-education. The foremost necessity is focussing the attention on the fundamentals of the problem. The present article is only a humble effort towards that end. Once the need is vividly realized, funds shall be, as they are, forthcoming in due course. We already hear whispers in high-level official circles that indicate a glimmering awareness in this direction. Let the whisperings grow in volume. Then surely our objectives will be achieved in a not too-distant future.

Teaching of Science in Schools

C. B. Rao

In this article, the author deals with the vital role of science in education today. He suggests methods of improving the teaching of the theoretical and practical aspects of science in secondary schools and outlines the qualities expected of a good science teacher. The good teacher of science should have not only a developed aesthetic sense, but should also be able to instil in pupils an appreciation of life and life's phenomenon along with the knowledge that he imparts. Dr. Rao advocates a concurrent course of general and professional education after the higher secondary stage to prepare the future teachers of science, so that they can teach two subjects of higher standard.

Dr. Rao is Deputy Director of Public Instruction in Andhra Pradesh and is also a member of the All-India Council for Secondary Education Sub-Committee on Science.

—Editor

It needs no great effort to realize that, in this century of science, the teaching of science should be given a dominant place. At the moment, scientific inventions day in and day out have been accounting for the improvement in different spheres of life, particularly Agriculture, Medicine, Industry and so on. The well-being of mankind has been on the increase through the application of numerous scientific discoveries. No doubt, on one side there is the feeling that these scientific inventions and discoveries have been contributing to the welfare of mankind; but on the other, there is a certain amount of gloom because of the apprehension that on account of the destructive power of some scientific inventions, science may lead to the end of mankind. But apart from these differing views about the utility of science, it is necessary to have a clear understanding of what science is. A clear concept of science and its scope should form part of our daily life but this clear understanding can only come as a result of good teaching, at different levels and in different spheres of education. The problem, therefore, is how the teaching of science could be made more effective.

Role of Science

At the moment, we have been intensely planning to have educational expansion to lead to educational reconstruction. There is an all-out effort to have general reorganisation. Endeavours are there to

promote better methodology and to enthuse the teachers of science to better effort. Consistent with the significant role of science, each individual in our society should have an insight into our fast developing scientific data. A better understanding of science is an essential concomitant of a better social and intellectual order. Through a better spread of scientific knowledge, prejudice and superstition will be gradually dispelled. For a deeper understanding of culture appreciation of values in science is as essential as in arts, literature, music. etc.

In our elementary schools, science is taught under such titles as Elementary Science, Object lessons, Nature Study, etc. In secondary schools, science is collectively termed General Science comprising of Botany, Zoology, Physics, Chemistry and Elements of Geology and Geography. For some reason or the other, there does not appear to be much sequence and continuity in the study of science from elementary schools to secondary schools. In fact, each one of the components of general science has its supporters, and there is considerable competition among them for recognition and also for relative weightage.

Aspects of Science Teaching

While studying the problem of the teaching of science, there should be emphasis laid on different aspects, each having a bearing on the methods and the materials adopted and used.

First, the psychic aspect of pupils has to be kept in view. In learning situations, the essential requisite is to correlate teaching and learning with the progressive mental development of children. Mental development is primarily the cumulation of concepts. Different concepts lead to knowledge. Each concept is built on repeated experiences and these concepts becoming more and more logical, develop a cumulative effect. The logical concepts referred to cannot be acquired through mere learning of words but they should be the products of constant reaction and interaction of pupils with the physical and social environment*. When concepts have developed, they also influence the sub-conscious factors and the further thought and conduct of the individual.

A realistic and humanistic type of education will avoid mere verbal teaching. Children have to be equipped with growing ideas, thoughtfully acquired out of their experiences. The power of observation is an essential factor in the process of learning; and the teaching of science has necessarily to promote this power through a variety of ways and means. Also it must develop desirable skills, promote scientific methods and inculcate scientific attitudes. To achieve these ends, the relation between learning ability and age should be considered. This will help in providing suitable instruction to the individual child. In other words, an appropriate content has to be designed. In this designing, teachers themselves should have a part. Their experiences should be the determining guide. One aspect has no doubt to be essentially recognised, and that is, that the maximum

*Butler: "Science and Human Life"—Chapter on "Pictures in the Mind".

effectiveness in learning comes late in adolescence—a conclusion that is supported by evidence from practical studies in classroom situations.[1] On the whole, the learning process should be adjusted to the child's level. In common parlance, there is what is called the child's readiness to learn. In this is implied the physical, the mental and the emotional maturity for the task on hand. If the child is not ready, learning becomes difficult; but if the child is ready, the process of learning is made quicker. The more responsive the attitude on the part of the learner, the faster is the rate of learning. A child forced to learn may develop a resentment to learning; while a child that is ready may show agreeable response to the same learning situation. No doubt, in addition to readiness on the part of the learner, the optimum time required for instruction is determined by the method of instruction, the type of motivation and the social framework in which learning takes place. This, in fact, is in respect of children of normal capacity. Children of better talents learn remarkably well even at an exceptionally early age, speaking in terms of the accepted school standards. McGraw's experiments dealt with such cases. Occasionally even children with normal endowments did extraordinarily well when there was high motivation.

Motivation Devices

This leads us on to a discussion of the motivation devices in learning. Where strong interests are created, high motivation is the result. The interest factor in learning has a bearing on what the child constantly sees and experiences, particularly at home. Home situations, generally speaking, have a challenging tone on the mind of the pupil. Intense appeal through recall of home situations helps in the rapid learning of situations outside the home. In other words, familiarity and an earlier comprehension of situations promote easy grasp, recall and retention. Learning situations, therefore, should have a bearing on the earlier experiences of a pupil acquired either at home or outside the classroom. Content of what is learnt in the name of science should, therefore, be based on the familiar environment. Also while determining the learning material, the present skills and the skills proposed to be developed should be kept in view. The present and future needs of the pupil should also form part of the content. The amount of time available, competition with other subjects and also a broad margin given for individual differences are other factors in the determination of the content for the teaching of science. The learner should have chances to learn while doing. This doing no doubt does have a variation consistent with the individual differences of children. Varied activities and a vast array of avenues for individual work provided through methods followed in purposeful projects help a good deal. Science fairs, exhibitions, excursions, celebration of Science days and activities of this type are opportunities to spot out the science talent in pupils. Talent thus located could be geared to maximum benefit in different suitable channels. Adequate monetary help proves handy to pupils.

[1]Peterson, J: "Handbook on Child Psychology"—Chapter on "Learning and Children".

Method and Content

Sumner in *"The Teaching of Science"* referred to some observations on the teaching of science in general. First, science was thought to be unimportant for girls. Secondly, Biology was expected to be taught without reference to Physical Sciences. Thirdly, life situations were dealt-with inadequately. In our present programme of teaching science, the above observations should be scanned and duly recognised and a proper methodology devised.

The method and the content should be such that they contain universal appeal to both boys and girls. That science is of utility in day-to-day life, should be driven home in every teaching situation. Besides giving every possible chance to pupils to develop an intrinsic appreciation of the utilitarian value of science, there should be opportunities to develop in them fine sentiments towards every aspect of science. Critical understanding and appreciation of the exquisite relationship between structure and function of every organism in nature, will have long-standing impact on the learner. The awe-inspiring situations in nature, when properly presented to the pupils either through class-room demonstration or through carefully-planned field work, kindle in them a quality of appreciations that will be lasting. The variety of colour and odour in nature, the remarkable resemblance between the organism of one generation and another, and the perfect adaptions shown by every organism in nature should, above all, mould the thought and action of the learner. Every word and action of the teacher both in the class-room and also in the field, should aim at inculcating in pupils the desired scientific interest and attitudes. It might be argued that to achieve this end an elaborate paraphernalia in the material environment is necessary. But it needs no emphasis to drive home the idea that even in simple situations which do not mean much cost, much could be achieved.

There is much that could be attributed to the teachers' own initiative. Apart from the material aspect which no doubt is also essential for a proper understanding and appreciation of science. greater stress should be on the psychic aspect of the teacher and the taught. A teacher with vision and sympathetic understanding of the pupils' needs may do very well even with a limited space and with limited amenities. One who has actualy taught in an environment which is beset with handicaps will be able to realise readily how effective a teacher can be even in the absence of all the requirements for the ideal teaching of science. A friendly atmosphere created in the classroom and also in the field, will help in promoting an easy understanding and a fruitful appreciation of science and all that it implies. Properly-planned work in the classroom, at the demonstration and practical tables and in the field, in the hands of a smart and a willing teacher, will bring about results of great value. More than anything, a science teacher should spare no efforts to develop the qualities of high precision and accuracy in pupils through whatever they do.

Need for a Central Institute of Science

There is, at the moment, a gap between the theory and practice of education. One may look up to the Training Colleges for new techniques of teaching. The Training Colleges should be a source from where the new ideas and techniques should spread to the schools around. In the wake of the training college endeavours, the schools should actively implement the new ideas and techniques, and make them perfect by more and more practice. The establishment of a Central Science Institute will give a general lead in this direction and also an impetus to science education in general.

One salient issue relating to the psychic aspect of pupils is the need to have an all-round sense training. In fact, children are prone to be actively moved by the different situations in nature. The multifarious colours and odours, the different sounds, with subtle variations, the vast array of tastes of the different products of nature and the enormous variations in the texture of the bodies of several organisms; all these, when properly appraised, may result in a vivid understanding of nature. All sciences, both physical and biological depict a natural unity and beauty. (Osbourn, Heiss, Montgomery: "Science in Everyday Life").

Facilities for Practical Work

In the preceding paragraphs, reference was made to the material and the physical conditions required for the teaching of science. A space that may at least have a semblance of a Laboratory is an absolute minimum requirement. In our schools at present, this is essentially lacking. Based on the funds available, a suitable Laboratory may be designed for each school. It will be a welcome step if a small workshop is attached to the Laboratory. Another keenly-felt want in our schools is a garden owned by the school. The other adjuncts like a museum, an aquarium and a terrarium, which help in proper teaching, should also be suitably devised even within limited funds. Visual aids like simple apparatus charts, slides, photographs and film strips if films are not available, will do a fine job in the hands of a skilled and enthusiastic teacher. The role of good text books, guides and manuals for the benefit of the teacher needs no emphasis in this context. A discussion of the value of aids in teaching is hardly necessary but the success of teaching can be judged on the basis of availability and utility of aids. A resourceful teacher in fact can devise ways and means to prepare or obtain different teaching aids. The teacher's initiative comprises the backbone of successful teaching. In fact, good teaching should be flexible, according to the amenities available and according to the needs of pupils. With the minimum material facilities and with the maximum of teacher's initiative and with a small fund placed at the disposal of the teacher, it should not be difficult to secure significant results in enthusing the pupils to learn and appreciate science.

Difficulties and Solutions

One difficulty pointed out by the science teachers is want of adequate time to prepare the necessary aids. To a large extent, this grievance is meaningful. Particularly to teach biology, fresh specimens are an asset. But it is not always easy to secure fresh specimens without a properly-maintained garden, aquarium, museum and so on. Also to make physical science lessons impressive, a copious collection of aids is necessary but this collection needs adequate preparation on the part of the teacher. Even to a teacher with the necessary drive and willingness, preparation time is a factor. In our school time-tables, adequate preparation time should be allowed to science teachers and this time should be reackoned as part of the instruction. Understanding and sympathy on the part of the Headmaster and also of the management in this respect will play a helpful role. To make science teaching vital and to carry quickly to every school door the idea of the growing importance of science education in schools, science development officers both at the State level and also at the District level, if possible, should be pressed into service. Through them it becomes possible to have adequate inspection of science teaching and also to render the necessary advice and help to science teachers, through talks, demonstrations, brochures and bulletins prepared for the purpose.

There is yet another aspect of the problem of science teaching. Appropriate personnel, animated by a live interest in science is a pre-requisite. For a teacher of general science, an understanding of all the basic sciences is a live necessity. A broad-based knowledge goes a long way to make teaching vital and to make all classroom situations meaningful and purposeful. The key for satisfying this requirement is wide reading on the part of the science teacher. More than this, a science teacher cannot afford to lose sight of the fact that he should keep himself abreast of the day-to-day developments in science. In fact, while the teachers' own attempts will help in this direction, it is a responsibility of the management of the schools to provide opportunities for the teacher to move about to participate in refresher courses and seminars etc. Short in-service courses leading to certificates or diplomas keep the teachers fresh for the job. Enhancement of emoluments to such teachers who put in effort in this direction promotes greater effort among them.

Concurrent Courses

In the matter of providing an adequate number of suitable general science teachers one idea is suggested here. The faculties of Education and the curriculum-making bodies of the Universities may work hand in hand to devise suitable curricula. It may be well to have a concurrent course of general and professional education for over four years, commencing after the higher secondary school course or after the Pre-University Course. General Science may be an

optional subject in such a course. Botany or Zoology students offering this optional as the main subject, may have supplemental instruction in Physical Science and Physics; Chemistry or Mathematics students offering General Science as an optional may have supplemental instruction in Biological Sciences. Each science teacher should be able to teach two subjects of a higher standard.

Such a concurrent course will be an attraction to such young men and women who are really interested in teaching as a career. During this course, the trainees will have chances to gain adequate learning experience in the principles of education and also in techniques of teaching, apart from knowing the content of the different subject. To have quality teachers, considerable effort and thought should be put into planning teacher education. Of late, important schemes and experiments are being launched in respect of teacher training. In recent years, the extension services scheme implemented in Training Colleges all over the country is a notable achievement and has formed a vital annexe to the teacher training programme.

Qualities of a Good Science Teacher

Mention should be made of a few personal qualities required in the science teacher. Apart from the desire to keep abreast of modern developments in science and apart from being alive to the repeatedly-changing trends in our intellectual climate, a science teacher should have a developed aesthetic appreciation of life as a part of his personality. Good colour sense is an asset. Skill in drawing and in easily depicting ideas in pencil or in colour on blackboard is an absolute necessity; skill in developing home-made apparatus and also the knack of promoting in pupils the instinct to collect are also helpful. In fact he should be a lover of science with an ardent appreciation for not only life and life's phenomena, but of the art of interpreting life and all that it connotes, to the growing pupils with impressionable minds. It is the function of the science teacher to direct emotional urges in children towards suitable goals for fulfilment and to harness their minds to a proper awareness of life phenomena.

Trust Begets Trust

V. P. Bansal

Placed below is a brief account of a simple experiment carried out by a teacher who had not lost his faith in children's innate integrity nor allowed himself to be browbeaten into conformity by colleagues who had lost theirs. This teacher had the courage of his convictions and continued over a period of ten years the system of trusting his pupils with serious responsibilities and was amply rewarded by an unfailing response from them. His experience should encourage others to try out such 'small' projects in their schools so that children may learn what is expected of them and rise to that expectation. Shri Bansal, the author of this article, is the Co-ordinator of the Extension Services Department, Government Training College, Jullundur. —Editor

In 1942, while studying in the B.T. class at the Central Training College, Lahore, I had a novel experience The professor of Psychology who wanted each of us to have a copy of the printed booklet of assignment priced at two annas declared, "I have placed the booklets in my room. You may walk into it whenever you are free and take a copy each for yourself and leave a two-anna coin in the tray." We walked into the room at our leisure during the day and bought a copy of the assignments from the tray. Like any other Indian student, having lived for twenty-two years among social surroundings where cash is checked and re-checked several times at each transaction big or small, this new experience somehow impressed me deeply and caught my imagination. I was strongly possessed with the idea of trying out the experiment in the broader field of my professional career.

When I took up a job at the D.A.V. High School, Shahbad in 1943, I recalled my promise to the teacher in me to try out the experiment. The opportunity was soon provided when I was told that, as a class teacher, it would be my job to realise school fees from the pupils each month. I thought I could perhaps try the experiment here. But first, I wanted to have some idea of the risk involved. I discussed my idea with an elderly senior teacher of the school who told me quite frankly as he put it, "If you want to pay your salary in making up

the loss, you may certainly try it." However, urged by the courage of my conviction, I decided not to give up the idea but rather to go ahead with it.

My First Venture

I had one section of class IX in my charge and I decided to collect fees from the students on a 'trust basis'. So on the tenth day of the month, when I was required to collect the fees in the specified fee period, I made known to the class my intention of introducing a new system of collecting fees. I told the pupils to work out the amount each one of them was to pay, walk one by one to the back corner of the class and put the cash in the cap placed there, and then report to me so that I could enter the amount in the register against their respective names. I must admit that knowing that the majority of students come from the lower middle class of society who generally find it difficult to pay the fee, I had some apprehension about my venture. I had decided that without making much fuss about it and without giving my colleagues a chance to jeer at me, I would quickly make up the loss, if any. But when at the end, I asked two of the students to check up the cash in the cap, while I totalled up the columns in the register, I was extremely happy to learn that the two amounts, reported and entered in the register and the total cash in the cap tallied pie to pie. My experiment was successful. I thanked the class for their cooperation, paid a tribute to their sense of honesty and congratulated myself on the success of the experiment.

Complete Success

Encouraged by this complete success at the very outset, I decided that I should always follow the same procedure for collecting the fee. I have been a school teacher for over ten years and have been in charge of different grades in different schools at different places. All through I have followed the same procedure for collecting fees; and I must have repeated the procedure over a hundred times. My colleagues were often surprised that whereas they had always to work with figures and cash beyond the fee period, which was of one hour duration, I hardly needed half the time given for this purpose. During the period of my ten years as a teacher, there has not been a single occasion when any pupil tried to dupe me. It sometimes happened that the cash in the cap was found short or in excess by a few annas, but the discrepancy was quickly resolved each time when I directed the pupils to recheck their accounts.

As I went ahead with my experiment, from month to month and year to year, an interesting incident happened and I feel tempted to report it here. In the year 1946, I was in charge of one Section of Class X of the Government High School, Jagadhri. As such, I was one day required to collect the University Examination Fees of Rs. 17 from each of the students of that class. I followed my usual procedure, checked the total cash realised and handed it over to the school clerk who tied it into a separate bundle. The University Examination Fees of the students of the other section were collected by the second master who was the teacher in charge of that class. His collection

was also tied into a separate bundle by the clerk who took the whole cash to the local bank for a bank draft in favour of the University. When the clerk returned from the bank, he brought back two currency notes, a tenner and a fiver, which the bank had discarded. The tenner, said the clerk, was from my bundle and it was in two pieces gummed together with a strip of paper at the back; while the fiver was a soiled one and was from the bundle that came from the other teacher. I immediately went to my class and asked if anyone knew who had given the torn note. Promptly one student got up and said, "It is mine and I put it to see if it would pass. Here is another tenner." Seeing this, the other gentleman too, tried to find out if someone from his class also would own up and change the soiled note. But to his great disappointment, no one offered to change it.

Widening the Field of Experiment

With this incident, my belief that children are generally quite worthy of our trust, was further reinforced. This helped me in another field of my school work. As Science teacher at the same school, it was a big problem for me to organise the laboratory work and even to arrange demonstration experiments for the large number of students offering Science in the higher classes. The Department had, at that time, made no provision for laboratory assistants in schools. Under the circumstances, I could easily have taken cover under the pretext of unmanageable numbers and given the pupils no chance of any laboratory work. I would perhaps have followed this course had not my confirmed trust in the pupils helped me to evolve what I call the 'open laboratory system.' I opened the laboratory to the students; they were free to walk into it during the recess or any other free time and engage themselves in laboratory work. Except for one or two cup-boards which contained special laboratory gadgets like the microscope, magic lantern, photographic camera etc., and certain less-used chemicals, all other cupboards were unlocked This system I continued for three years and the experiment was very successful. Except for very minor losses, such as these of a triangular file or two and a couple of borers (losses of a kind that take place under even the best of vigilance and care), there was nothing to show that the confidence reposed in the students was not repaid.

Training Good Habits

If education also aims at the moral development of children and if we are really serious and conscious of this great responsibility in this direction we cannot certainly feel contended by mere preaching about desirable moral traits and values; because this leads us nowhere. There is need for practical training, and the school and home must provide ample opportunities for the pupils' proper moral growth. When we trust children, they repay it manifold. They trust those who trust them; they trust themselves and also others with whom they associate. Try it and you will soon feel convinced that the children of the Indian soil are as worthy of trust as those of any other country.

Introducing Books on Evaluation

In this issue, we introduce our teachers to the fifth in the series of books on evaluation. Shri Y. B. Patwardhan, Evaluation Officer of the D.E.P.S.E. is the author of this digest.

—Editor

CONSTRUCTING EVALUATION INSTRUMENTS

by

J. Furst

Longmans Green & Co., 1958

It is well recognised by now that evaluation is a very important aspect of the programme of education. The success or otherwise of the programme can be truly judged only if it is evaluated on scientific lines. A new teacher, therefore, will have to be well-acquainted with the problems of evaluation. However, of all the competencies a teacher needs, probably none is as neglected as that of evaluating student progress.

The major purpose of this book is to help teachers to "(a) acquire an understanding of the several basic problems involved in developing any evaluation technique, (b) further their understanding of the principles of test construction, (c) become familiar with some of the best references in the field, and (d) broaden their understanding of the purposes which can be served by tests and other techniques of appraisal."

The book is divided into two parts. Part I deals with the basic problems of evaluation (Chapters 1 to 6). In the first chapter, the author has isolated each problem underlying evaluation procedures and subjected it to intensive study. The variation that each problem might take and the alternative ways of meeting it have also been pointed out.

The next two chapters are devoted to the critical study of WHAT to evaluate. They discuss a rationale for selecting educational objectives, and for determining those aspects of behaviour which we regard as important in our teaching. It is stressed that while stating the behaviours, a variety of limiting conditions must also be specified.

The next three chapters are devoted to the discussion of some of the technical problems like selecting appropriate situations, getting a record of behaviour or its products and summarising the evidence so recorded. In each of these chapters the author has first gone through some concrete illustrations of a general problem, and then has used these as a basis of elaborating the requirements which a satisfactory solution should meet.

Part II (Chapter 7 to 13), deals with the special techniques in constructing achievement tests.

The seventh chapter is devoted to a discussion on problems concerning planning the test. It gives suggestions regarding the use of the two dimensional content—behaviour chart in constructing a test. It also discusses the comparative merits and demerits of different types of test items with practical suggestions in the use of each. Suggestions are also given regarding the decisions to be made in matters of technique, including the (a) form of the test (b) length of the test (c) level and range of difficulty and discriminating power of the test (d) manner of recording answers (e) time limits and (f) scoring system.

The eighth chapter is devoted to the problem of constructing items to fit specifications dictated by the plan of the test. The success of a test will depend upon the ability and skill with which a teacher is able to do this job. The author has supplied illustrations from different subject areas in support of his suggestions. A list of reference material is also appended.

The next two chapters (Chapter 9 and 10) provide suggestions, with suitable illustrations, on the construction of supply-type and choice-type items. They also suggest how and when each type can be used to the best advantage. In the eleventh chapter, a variety of ways of review, assembly and reproduction of the test material are pointed out. Valuable suggestions are also given as to how each form can help evaluating some specific outcomes.

The next chapter details different procedures of administration and scoring along with the problems involved in each, with suggested solutions to them. With regard to administration of tests, detailed instructions are given in respect of parallel forms of tests and corresponding answer sheets, directions for recording answers, treatment for guessing and other important aspects. In dealing with the scoring procedures for choice-type items, the author has fully discussed the salient features of hand-scoring and machine-scoring. The use of the correction formula is shown For scoring short-answer type questions, detailed suggestions are given. The analytical method and the whole method of reading answer scripts are also weighed.

The last chapter throws light on some problems concerning (a) the summarisation and use of results of scoring (b) interpretation and use of item analysis data for improving the instrument.

curriculum and instruction (c) different methods of determining and improving reliability and (d) other statistical treatment of the data.

Throughout the book, the suggestions made are substantiated with illustrations from various life areas even outside the school walls. Ample reference material is suggested for further reading. This has made the book functional. The style of writing, which is simple and direct, makes the book interesting, readable and helpful not only to the workers in the field of education, but also to the growing number of professionals in business, industry, government and the military services, who are concerned with the evaluation of instruction, measurement of proficiency and test development.

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